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ABSTRACT

The Fifth Western Symposium on Learning, held November 15 and 16, 1973, considered the question of how cultural factors affect learning that produces important differences in personality. The following papers, with commentaries, are collected in this volume: (1) "Cultural Factors in Learning and Education: Opening Remarks," by Paul Woodring; (2) "Varieties of Intellectual Experience," by Harrison Gough; (3) "Varieties of Cognitive Competence in a Cross-Cultural Context" (commentary on Gough's paper), by Karl Holzmuller and Ana Holzmuller; (4) "Personality, Race and Social Class Determinants of Occupational Goals," by Lawrence W. Littig; (5) "Motivation: Antecedent to Learning" (commentary on Littig's paper), by Ralph Glebe and Robert D. Meade; (6) "Culture and Language as Factors in Learning and Education," by Wallace E. Lambert; (7) "Bilingualism: Is It Desirable?" (commentary on Lambert's paper), by Frances E. Aboud; (8) "Cultural Tolerance, Learning and Education," by Thomas A. Billings; (9) "Another Point of View" (commentary on Billings' paper), by Peter J. Elich; (10) "Cultural Impact on School Achievement," by Robert L. Thorndike; (11) "Culture, Family, Economics and Education" (commentary on Thorndike's paper), by Evelyn P. Mason and Thomas M. Smith; (12) "Kinship, Psychosocial Homeostasis (PSH) and Learning," by Francis L. K. Hsu; and (13) "The Limits of Human Potential" (commentary on Hsu's paper), by George Cvetkovich and Frank Pasquale. (Author/RM)

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WESTERN SYMPOSIUM ON LEARNING

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CONTENTS

page

Preface 3
Frances E. Aboud & Robert D. Meade

Cultural Factors in Learning and Education: Opening Remarks 7
Paul Woodring, Chairman of the Symposium

Varieties of Intellectual Experience 9
Harrison Gough, University of California At Berkeley

Varieties of Cognitive Competence in a Cross-Cultural Context 49
(Commentary on Harrison Gough's Paper)
Karl Hollzmuller & Ana Holzmuller

Personality, Race and Social Class Determinants of Occupational Goals 59
Lawrence W. Littig, Howard University

Motivation: Antecedent to Learning 82
(Commentary on Lawrence Littig's Paper)
Ralph Glebe & Robert D. Meade

Culture and Language as Factors in Learning and Education 91
Wallace E. Lambert, McGill University

Bilingualism: Is it Desirable? 123
(Commentary on Wallace Lambert's Paper)
Frances E. Aboud

Cultural Tolerance, Learning and Education 129
Thomas A. Billings, Western Washington State College

Another Point of View 140
(Commentary on Thomas A. Billings' Paper)
Peter J. Elich

Cultural Impact On School Achievement 145
Robert L. Thorndike, Teachers College

Culture, Family, Economics and Education 155
(Commentary on Robert L. Thorndike's Paper)
Evelyn P. Mason and Thomas M. Smith

Kinship, Psychosocial Homeostasis (PSH) and Learning 163
Francis L. K. Hsu, Northwestern University

The Limits of Human Potential 177
(Commentary on Francis L. K. Hsu's Paper)
George Cvetkovich & Frank Pasquale

Preface

This symposium takes up a broad topic which has achieved increasing importance during the past few years, a consideration of how cultural factors affect learnings that produce important differences in personality. Making use of the basic methodologies and theoretical tools developed in their discipline, four psychologists have investigated different aspects of this problem with considerable vigor and to great depth. In addition, the symposium broadened to include the empirical findings and theoretical analysis of a leading cultural anthropologist. An educator looked at some philosophical assumptions developed by scholars in several fields and takes up the even broader question of putting the entire matter into a practical and workable perspective from the standpoint of education.

Harrison Gough, Professor of Psychology at the University of California at Berkeley, presents us with a thorough discussion of the concept of intelligence from a cross-cultural point of view. He suggests that we must revise our conception and measurement of intelligence, and provides a framework in which to do this in order to deal with the pragmatic issue of assessing intelligence in many different cultures.

Professor Lawrence W. Littig of Howard University reports his most recent findings on how sex, membership in different racial communities and social class affect the kinds of occupational goals of young people. He examines this process within the framework of how affiliation, power and achievement motivation help to shape the attitudes that contribute to the basic occupational selection. The importance of these processes for the ultimate education and training programs contributes an important dimension on just what an individual in these groups aspires to do.

Professor Wallace E. Lambert of McGill University bridges the gap between psychology and education by discussing the psychological consequences of becoming a bilingual through an innovative home-school switch bilingual program. His findings point to a complex development of both cognitive and social skills in bilingually-educated children. He suggests that we have a hard serious look at both the beneficial and detrimental effects of being educated in a second language. His comments are, however, directed as much to the linguistic majority as they are to the linguistic minorities.

Thomas A. Billings, Professor of Education at Western Washington State College, concerns himself with philosophical and personal frameworks within which educators and scientists approach members of other cultural and sub-cultural groups. Using the writings of three prominent thinkers from widely-differing dispositions, Dr. Billings develops the theme that each cultural setting does indeed provide workable opportunities for their youth to learn although their method and content may vary greatly. Relying heavily on the personal value of language to the individual, he draws implications for how the education and learning process may sometimes be enhanced and sometimes be retarded.

Professor Robert L. Thorndike of Teachers College, Columbia University brings our attention to one specific aspect of school achievement, that of reading. He describes for us an investigation of broad scope which dealt with the reading achievements of children from many different cultural backgrounds. The methodological considerations of such an international study are in themselves worth pondering; and the findings provoke an imaginative discussion of the effects of cultural variables on school achievement.

Francis L. K. Hsu, Professor of Anthropology at Northwestern University, presents a theoretical model which attempts to explain several levels of interaction the individual has with his culture. He effectively demonstrates through a continuing empirical investigation that culture can limit the imagination and the flexibility with which members of that culture approach and deal with problems presented to them.

Each of the major contributions is followed by an analysis and commentary by faculty and students in the Center for Cross-Cultural Research and its parent body, the Psychology Department at Western. Introducing the symposium, Dr. Paul Woodring presents a review of the history of psychological contributions to education and ties this history to that of this college which, this year, celebrates its seventy-fifth year.

The editors are grateful to a number of persons whose help made the symposium possible. Again this year, Professor Woodring presided over the symposium and assisted admirably in developing its continuity. George Cvetkovich, Robert Marx, Robert M. Thorndike, Walter Lonner and Peter Elich very kindly contributed time from their other duties as members of the faculty to assist with important details. Carolyn Muller took charge of correspondence, bookkeeping and other frustrating business matters essential to the symposium's development. John Marks and Corbin Ball of Western's Educational Media Center handled technical details. Joy Dabney did the illustrations and Tren Abrahams and Terry Borth read the final proof. To all of these plus numerous others who generously contributed their time and their skills we offer our thanks.

The symposium was held on November 15 and 16, 1973 and was attended by over 600 teachers, students and other individuals from four states and Canada. Dr. George Cvetkovich, assisted by other faculty members, offered a course in background materials which preceded and followed the symposium. This published record of the several presentations by distinguished scholars along with commentary by students and faculty at Western is offered with the hope that it will increase the understanding of serious students of human affairs about the important role played by culture in the processes of learning and education.

As editors of the proceedings of the Symposium, we have enjoyed working with all of the participants and with those who have written commentaries on the several papers.

Frances E. Aboud
Robert D. Meade

Bellingham, Washington
February, 1974

Cultural Factors in Learning and Education: Opening Remarks

Paul Woodring,
Chairman of the Symposium

The Fifth Annual Symposium on Learning was made a part of the celebration of the 75th Anniversary of the founding of Western Washington State College. This combination was deemed appropriate because, through much of its history, Western has been primarily a college for the education of teachers. And learning – broadly defined – is the central problem in both psychology and education.

Seventy-five years is a short time in the history of higher education. Several American colleges were more than two hundred years old when Western opened its doors. And many European universities were centuries old when Harvard was founded.

However, the history of this college is almost exactly coterminous with the history of educational psychology as a discipline and with the history of the emphasis on learning as a part of psychology. Most nineteenth century psychologists, particularly the followers of Wilhelm Wundt, almost completely ignored the psychology of learning and had little interest in the educational process.

American psychologists had given somewhat greater attention to psychological problems in education; but when Western began educating teachers, in 1899, William James' ***Talks to Teachers*** had been in print for less than a year. G. Stanley Hall was one of the few psychologists who had studied children and he was beginning work on his monumental *Adolescence* which was not to be published for another five years. John Dewey was already well known to psychologists for his paper "The Reflex Arc Concept," but his most important contributions to education lay in the future. Normal schools and teachers still were teaching Herbartian theories of instruction.

In 1899:

John B. Watson was an undergraduate and the Behavioristic Revolution in Psychology lay more than a decade in the future.

Wertheimer, Koffka, and Kohler were students in Germany and the word "Gestalt" was nothing more than a Germon common word.

Sigmund Freud was a 43 year old psychiatrist, already getting some attention in Europe but still almost unknown in the United States. (William James had mentioned him in one publication as "A Viennese psychiatrist of considerable reputation," but not by name.)

Alfred Binet already was a French psychologist of some note but had not yet turned his attention to intelligence testing. Psychologists were not yet giving much attention to individual differences in capacity for learning.

Jean Piaget, three years old in 1899, probably already was exploring the content of a child's mind.

B. F. Skinner was not yet born.

But Maria Montessori was a 29 year old teacher in Rome, already known for her new approach to the teaching of young children.

It is obvious that much of what is known about psychology and education has come during the history of this college. Our knowledge continues to expand, and the purpose of this symposium is to help us – students, faculty, and alumni – to keep abreast of the changes.

In previous years our symposia have dealt with Early Learning, Cognitive Learning, Social Learning and Learning in the Classroom. This year we turn our attention to Cultural Factors in Learning and Education.

8

Harrison Gough
University
of California
Berkeley

Varieties of Intellectual Experience

Beginnings

Intelligence as measured is one of those psychological variables that seems to have been around forever, even though we are still just short of the 70th anniversary of the first successful attempt at testing – the 30-item scale introduced in Paris in 1905 by Alfred Binet and Theophile Simon. It is worth noting that the college where we are holding these meetings is this year celebrating its 75th year, and is thus an even older and more venerable institution. Whatever its flaws and defects, any device or institution that can remain viable over time spans of this magnitude must have redeeming features. In the discussion to follow I intend to take up many of the criticisms that have been leveled against intelligence as a concept and intelligence testing as a method; the history of this domain of work, indeed, shows that almost no one – the mental testers included – has been satisfied with the ways in which the tools function and the concepts are defined. But at the same time we should remind ourselves of the rare survival value displayed by intellectual measurement; it is tempting to suggest that testing for intelligence will be going on long after the attainments of this generation of psychologists are stored in the archives and forgotten.

From our present vantage point it is possible to see that the early researchers on measurement followed two reasonably distinct pathways. Galton (1883), who pioneered in developing ingenious techniques for calibrating mental activity, and James McKeen Cattell (1890), who introduced the phrase "mental test" and who proposed a standard set of 10 measures, are most prominent among those who took the first route. Their goal was to assess basic and discrete mental processes, so that a coherent scientific description could subsequently be given of the action of larger and more comprehensive combinations. From atoms to molecules to compounds in physical matters is an analogy suggestive of the progression intended. The determining idea here – to identify fundamental components of mental activity and to develop reliable means of assessing their strength and magnitude – is sound. Psychology today is still seeking mapping techniques of just this kind, and some of the dissatisfaction felt by behavioral scientists in regard to mental testing derives from the fact that cartographic (topological) problems are far from solved.

Unfortunately, Cattell's choice of measures was poor, putting too much emphasis on peripheral and motoric functions and too little on cognitive and problem-solving responses. For example, Cattell proposed to assess "bodily power" by means of a dynamometric reading of strength of grip in the left and right hands, to measure rate of movement by recording time required to pass right hand and arm through an interval of 50 centimeters, and to calibrate threshold for pain by pressing a tip of hard rubber against the center of the forehead. By modern criteria, only one of Cattell's tasks appeared to offer promise as a test of intellectual ability, the number of letters that could be repeated after one hearing.

The defects in Cattell's approach suggested by logical and intuitive analysis were very soon confirmed by empirical study. Wissler (1901) compared scores from Cattell's tests with anthropometric measures (e.g., weight and height) and with college grades. The physical measures correlated positively with each other, and grades earned in different courses were similarly inter-related. Neither category, however, related to scores on Cattell's tests and the relationships among the tests themselves seemed to Wissler to be at only a chance level. In the United States, at least, the mental testing movement was brought to a rather abrupt halt (cf. Tuddenham, 1962).

Binet and Simon

The other pathway was that taken by Binet and Simon. In 1904 the Minister of Public Instruction in Paris appointed a commission to study ways of making sure that educational benefits were made appropriately available to defective children. Binet, as a member of this commission, responded to the practical demands of the situation and also to the vagueness and the fuzziness of the formulations of subnormality put forward by his colleagues. He took up the task, therefore, of developing a more precise and reliable mode of classification and with his psychiatrist collaborator Simon offered the 1905 metrical scale of intelligence as a first step toward what was needed.

The key point is that the Binet-Simon scale was a practical tool, intended to meet a tangible and readily identified social need. It had little to say about intelligence as a concept, about intricacies of measurement, or about the topology of the mind; in fact, as Herrnstein (1971) puts it, Binet simply finessed the weighty problem of defining the variable. He did this by selecting items showing an age-developmental gradient among children at five age levels – 3, 5, 7, 9, and 11. Modern psychologists, worried about sampling problems, might take heart from the fact that only about 50 children were used to establish these progressions. Among the 30 items selected and ranged in order of difficulty were the naming of familiar objects, following instructions to touch various parts of the body, digit span, and distinguishing between abstract words such as "liking" and "respecting."

The age-equivalence concept was much more clearly developed in the new scale Binet and Simon introduced in 1908. Subtests or items were classified by age, according to the proportion of children at each age able to respond correctly. Because the standardization sample was still small (203 children aged three to twelve) precise assignments were difficult; for the most part, subtests assigned to a given age were passed by from 50 to 90 per cent of the children at that age. For example, at age 11 the average child could give 60 words in three minutes, and could rearrange a simple anagram into a sentence. At age 12 he could repeat seven digits, and at age 13 could draw the design that would result from cutting a triangular section out of a quarto-folded piece of paper.

The number of subtests for each age avried from three to eight. This difficulty of inequality was rectified in the 1911 scale, which provided five subtests at each age and which extended the series up to fifteen years. A mental age could then be computed for any child by setting a base at the age for which all five subtests were passed and then adding one-fifth of a year for each subtest passed from a higher level.

An obvious need was to relate this computed or estimated mental age to chronological age, so as to furnish an index of retardation. Binet himself used the simple arithmetic discrepancy, and regarded a two-year deficit in mental age as indicative of a serious problem. Binet died in 1911, but a year later Wilhelm Stern suggested that the ratio or quotient of mental age to chronological age (times 100) could serve as an index of growth, with values less than 100 diagnostic of a retarded rate and of greater than 100 or an accelerated rate. This intellectual quotient or "IQ" quickly captured the favor of psychologists, and was adopted as a method for reporting scores by L.M. Terman (1916) in his American adaptation of the Binet tests. By the 1920's the "IQ" concept (whether understood or not) had found its way into the everyday language of the English-speaking world.

Conceptualizing Intelligence

Although Binet's tests were pragmatically successful they did not help very much to clarify the concept of intelligence, and because they blended together a wide variety of tasks and problems into a single score did not contribute to the kind of topological or functional analysis that many psychologists desired.[1] Charles Spearman (1904, 1927) was one of the first to attack the conceptual issues in a significant manner. His inspection of correlation matrices for test scores, school grades, or estimates of ability, revealed an interesting "tetrad difference" criterion, such that for four variables the equation $r_{13} \times rr_{24} - r_{14} \times r_{23} = 0$ always held true. This led to the conclusion that there was a basic underlying intellectual capacity (called "g" for general) acting in concert with a host of lesser and unrelated factors to produce the scores entering into the matrix. The essence of the g-factor in action is to "educe" or infer relationships, and to transfer these relationships to new and different situations. Tests in the Spearman tradition, still favored by many British psychologists, place heavy stress on these two processes.

Growing interest in the formal problems of measuring intelligence, and the success of testing techniques used with American soldiers in World War I, led to a special symposium on "intelligence and its measurement" published by the *Journal of Educational Psychology* in 1921. Seventeen leading investigators were asked to comment on two topics: (1) "what I conceive intelligence to be, and by what means it can best be measured by group tests; and (2) what are the most crucial 'next steps' in research?" Among those who replied were F. N. Freeman, M. E. Haggerty, V. A. Henmon, Rudolf Pintner, S. L. Pressey, Lewis M. Terman, Edward L. Thorndike, L. L. Thurstone, and Herbert Woodrow, psychologists who then and later were priminent in this field of research.

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[1] An excellent current restatement of this need for topological analysis is that by Bouchard (1968, p. 29): "The task of assessing intelligence, construed as a scientific endeavor, requires the devising of measures that specify the important parameters of cognitive structure for particular individuals."

Several of the specific comments made warrant our attention now, as they pertain to the distinction between prediction and diagnosis that is still so important in today's work. Pressey (p. 144-146), for example, wrote:

> The writer has been asked for a statement as to what he conceives intelligence to be, and as to what types of test materials can best be used for the measurement of intelligence. Frankly, he is not very much interested in the question – although a large part of his time goes to work with tests of 'intelligence.' Instead, he is interested to know what such tests will *do*, in solving this or that problem . . . Always, it must be kept in mind that there is no value in measuring intelligence simply for the sake of measuring it; the tests are given in an effort to deal with some practical problem. And it is in proportion as they as they deal efficiently with that problem that they are considered satisfactory.

Thorndike (p. 125) likewise stressed the predictive powers of the instruments:

> Some of us have, I fear, claimed a generality for our measures of status and a surety of inference from them to original inborn capacity which it would be very hard to justify. The estimates which the psychologist makes with his tests are much better than those which parents or teachers or ordinary medical practitioners make of the same facts, so that we are justly proud of them, but we should be the first to recognize their limitations. The value of a test score is its value in prophesying how well a person will do in other intellectual tasks. Our claims may wisely be limited to the actual demonstrated power of prophecy.

Terman also remarked that we should be "justified in demanding that an intelligence test should correlate well with what we may call 'school educability.' "

Two years later, E. G. Boring (1923) published his famous paper on intelligence, in which he made the assertion that "intelligence is what the tests test." The ensuing discussion was not in any way as simplistic as this statement implies, and Boring explicitly noted that the definition was open to and in need of extension as soon as scientific observation could provide a broader basis for conceptualization. Nonetheless, the damage was done and even today, in popular writing, letters to the editor, etc., one encounters triumphant quotations of this dictum as proof of the absurdity of the entire enterprise of measurement. However, even at that time, scholars were pushing beyond Boring's convenient tautology. E. L. Thorndike (1920), for example, suggested that intelligence could be manifested in different kinds of endeavor, specifically in coping with abstract ideas and problems, in dealing with mechanical relationships, and in adapting to the exigencies of social living. As Henmon pointed out in the 1921 symposium mentioned above, Thorndike's formulation meant that different scales of measurement would be needed, with scores to be represented as a profile.

Questions were also raised about the use of mental age equivalents for scaling intelligence. Binet had assigned age values to subtests according to the age at which half or more of the children were able to respond correctly. An equally plausible procedure would be to give as the mental age for an item the average chronological age of persons who answer it correctly. The two definitions, however, as Thurstone (1926) demonstrated are not equivalent. One gives the regression of age on test performance, and the other of test performance on age. Furthermore, because performance begins to taper off somewhere in the mid-teens, and comes to an asymptote a few years later, absurdities arise such as the "discovery" during World War I that the average adult male had a mental age of 12 or 13. Thurstone's (1926, pp. 276-277) recommendation was to use a deviation score, in which the performance of any individual would be compared with a norm group for his age and then expressed as a rank:

> All of these difficulties would be avoided entirely if we should discard the awkward mental age concept and proceed instead as follows. When a child has been given a mental examination of the Binet type, or any other, we might ascertain the child's chronological age. Then we might consult our norms and say that this child's mental development, compared with

> other children of the same age, has a percentile standing of, say, 70. This would be extremely simple. It would mean that this child is a little above the average in intelligence among children of its own age. It would mean that 30 per cent of the children of the same age are brighter, and that 70 per cent are less bright. The intelligence quotient would be discarded along with the mental age concept on which it depends and the percentile standing of the child would be used instead.[2]

A few sentences later in his paper, Thurstone suggested that the "sigma standing" of the child might be an even better index of the meaning of a particular score. Thurstone's remarks have proved to be prophetic, for the "sigma standing" – which is the difference between a particular score and the mean for that age, expressed in standard deviation units – has come to be the preferred and modal method for presenting test scores. But Thurstone's remarks concerning use of the IQ concept were less prescient. Even in the Wechsler Adult Intelligence Scale (Wechsler, 1958) and the 1960 edition of the Stanford-Binet (Terman & Merrill, 1960), both of which use deviation scores, the derived measures are still referred to as IQ's.

Doubts also began to be voiced concerning the two-factor theory of intelligence advanced by Spearman. Spearman contended that intellectual performance was the joint outcome of a general factor or "g", entering into every measure of ability for any individual, and a set of specific factors (denoted by "s") each of which entered into some but not all of these same measures. For example, according to Spearman's estimate talent for classics revealed relative weightings of 15 to 1 for g and s. Spearman acknowledged the possibility of group-factors – clusterings intermediate between g and s – but did not believe them to be very consequential. Truman Lee Kelley (1928) was one of the early writers to claim a more important role for such ability groupings as verbal, numerical, spatial, and memory.

Group-factors

Thurstone, who had developed the methodology of factor analysis (Thurstone, 1935) on the basis of Spearman's tetrad criterion, also presented what was to stand as the classic exposition of group-factor theory (Thurstone, 1938). Thurstone's goal was to break intelligence as an overall concept down into its fundamental elements. The number of these factors, or primary mental abilities as Thurstone described them, varied somewhat depending on the choice and number of items used in factoring. Seven, however, appeared to be reasonably well established:

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1. *Verbal comprehension* (V). Measurable by vocabulary tests.
2. *Word fluency* (W). Measurable by counting the number of words beginning with a certain letter that can be written in a brief period.
3. *Number* (N). Can be assessed by tallying the number of simple arithmetic computations that can be finished in a short time span.
4. *Space* (S). Can be indicated by the capacity to visualize a simple letter or figure after rotation in two-dimensional space.
5. *Memory* (M). Measurable by learning of pairs of items, after which presentation of one item in a pair is the signal for recall of the other.
6. *Perceptual speed* (P). Speed in identifying pictured objects as the same or different.
7. *Reasoning* (R). Can be measured by asking for the extension of a series such as aa-bb-cc-d_.

With reference to the diagnosis versus prediction dichotomy cited at various points in this discussion, it is clear enough that Thurstone's short battery of tests would provide a more differentiated picture of the mental functioning of an individual than would a single-score test of the Spearman kind. Even more differentiation is provided by the recent factor "reference kit" of French, Eckstrom, and Price (1963), which contains two to four tests for each of 24 primary factors. However, in regard to prediction of ordinary criteria such as school achievement, performance at work, and the like, single-score tests are as valid as multivariate batteries (cf. McNemar, 1964). This finding was envisaged by Spearman, who contended that because of the universality of *g*, any test will do just as well as any other provided only that its saturation with *g* is equally high.

One of the most recent and intricate psychometric formulations of intelligence is that of Guilford (1956, 1959, 1967). On the basis of factorial considerations, Guilford defined three facets of intellectual functioning: contents, operations, and products. A structural model (a cube) was then elaborated from these three dimensions. Let us be more specific. First, under contents, problems involving figural, symbolic, semantic, or behavioral elements can be specified. Second, the operations to be performed on stimuli of these four kinds can be classified as evaluation, convergent analysis, divergent analysis, memory, and cognition. Third, the products of these five operations applied to the four contents can be classified under six categories; units, classes, relations, systems, transformations, and implications. The number of cells in the structure-of-intellect cube thus comes to 120, i.e., 4x5x6, and theoretically at least one could anticipate the construction of 120 separate and distinct subtests for each of these variants.

A model such as Guilford's is heuristic in that it points to new kinds of tests while at the same time permitting the classification of all those known and recognized. A research program can then be launched, seeking to develop new measures in those cells for which tests are currently unavailable. At the present time tests are available for approximately two-thirds of the 120 cells in the cube. From the diagnostic standpoint, Guilford's model is almost overwhelming, a step in the right direction, but of Brobdingnagian magnitude. In principle, an individual could be compared to the norms on all 120 functions, but it would obviously be time-consuming to do so and once done the implications of the deviations would in most instances await future specification.

Hierarchical Issues

The approaches of Guilford and Thurstone seek to identify components or facets of the intellectual domain, but do not say very much about hierarchy or levels of importance. Spearman, as we have noted, posited a master or "monarchic" variable (*g*), reigning sovereign over a host of lesser talents; but few if any psychologists today would agree that this sort of "general" ability enters into every intellectual performance. Even Burt, a staunch upholder of the Spearman tradition, estimated that the *g*-factor accounted for only about 50 per cent of the variance in tasks such as verbal reasoning and arithmetic (Burt, 1958). Students such as Burt (1949) and Vernon (1965), therefore, proposed what is now called the hierarchical view, in which general intelligence separates into major branches such as a verbal-educational factor (v:ed) on one side and a spatial-perceptual-practical factor (k:m) on the other. Farther down the hierarchy, and in subordinate status, come abilities for more specific tasks such as reading and spelling, clerical aptitude, recognizing mechanical relationships and principles, and various kinds of scientific and technical pursuits.

The battery of measures that Vernon (1969) selected for his cross-cultural testing program illustrates the practical impact of the hierarchical point of view. Seven of his devices came from the v:ed factor: arithmetic, English usage and comprehension, spelling, vocabulary, word learning, and information learning. Seven also came from the k:m factor: Porteus mazes (Porteus, 1937, 1965), picture recognition, embedded figures, design reproductions, Kohs block designs (Kohs, 1920), Goodenough's (1926) and Witkin's (Witkin, Dyk, Faterson, Goodenough, and Karp, 1962), draw-a-person tests, and the Vernon formboard. Other tests came from Piagetian research (cf. Goodnow and Bethon, 1966) on time concepts, conservation of mass, volume, length, and number, and from work on concept formation (cf. Goldstein and Scheerer, 1941) and creativity (cf. Torrance, 1966). Two tests of induction were also used, a letter-number-word series and a nonverbal series. Scores on these tests were plotted in profile form, permitting comparison of Hebridean, Canadian Eskimo and Indian, Jamaican, and Ugandan young boys with English norms. By observing variations in these diagnostic profiles Vernon was able to make inferences about specific advantages or deficits in the backgrounds and upbringing of his subjects.

Developmental Issues

In addition to the structural-classificatory issues in conceptualizing intelligence there are equally significant developmental phenomena. Binet's grading of tests by age was based on the notion that there is a growth gradient in intellectual functioning. But how and in what way do abilities change with age? A familiar evolutionary principle from the biological sciences is the progression from general to specific, from undifferentiation to differentiation. This trend is visible in the correlational patterns among ability tests over the age range from about 8 to 18 (Garrett, 1938). Tests for infants and preschool children are often unreliable, and in most cases very modestly related to performance once reading skills are developed (cf. Bayley, 1955); beyond the age of 18, there is little or no increase in most tested functions and my middle age observable decreases have occurred, particularly in those abilities involved in quick response and new learning. But during the period of measurable growth, there is a gradual breakdown of an "amorphous general ability" into a set of quite distinct aptitudes (Garrett, 1946).

This "differentiation hypothesis," as Garrett termed it, has important implications for both theory and practice. On the theoretical side, it appears to permit a rapprochement between Spearman general factor and group factor viewpoints. During the elementary school years there is a functional generality among tests addressed to abstract or conceptual thinking. At this stage the basic skill seems to be largely verbal or linguistic; solving arithmetic problems, for example, is as contingent on the ability to read and understand directions as upon the grasp of numerical princles. Later, by high school and college levels, the role of overall ability or *g* is diminished and particular skills in spatial, numerical, verbal, and other domains become more important. The "structure" of intellect a psychometric researcher will discover, it follows, will depend in part on the age and developmental status of the subjects utilized in his analyses.

From the practical standpoint, the differentiation hypothesis suggests that diagnostic testing of the kind recommended in this presentation is of more value at older than at younger ages. A single-score examination such as the Stanford-Binet may provide all or most of the valid information one can obtain from testing of grade school children. But by junior high school and high school ages, multivariate tools can provide reliable and meaningful diagnostic subscores.

IQ Constancy

Another way of looking at the developmental problem is to ask whether later performance or standing can be forecast from earlier. The IQ, clearly, assumes that this can be done as the basic intention of this index is to reflect rate of growth. For the index to function properly, three conditions must be met (cf. McNemar, 1942): (1) there must be a consistent and progressive increment in the variance of the mental age distributions with increasing age; (2) there must be homogeneity of function throughout the test series; and (3) chronological age and IQ must be uncorrelated. Few if any group tests meet the second requirement, and only the most painstakingly calibrated measures will meet the first. The constancy or inconstancy of the IQ, it can be seen, will depend in part on whether the tests used meet or do not meet these three statistical criteria. Any analysis of change in IQ, it follows, must be careful to specify the test or tests used.

However, the IQ constancy debate, which was at one time bitterly controversial, has largely subsided. Interest today is centered more on the degree to which intellectual performance at a later age can be forecast from measures taken at an earlier. By and large, one would prefer to use tests in an earlier period that do have predictive validity for later performance in school and work. John Anderson (1939) put forward the notion of overlapping elements, which stipulated that [illegible] later measure will correlate with an earlier to the extent that it assesses functions also measured by the prior test. That is, the second test will include new material plus old elements that overlap those in the first test. The "gain" in scores between first and second testing will be based on the new material, and by itself will not relate to initial performance; the correlation between the two tests derives only from the elements they have in common. R. L. Thorndike's (1966) analysis of Harvard growth study data is one that lent support to this formulation, as it showed gain to be essentially uncorrelated with initial standing.

Correlation between an earlier and later test can be enhanced by using this relationship as a criterion for selecting elements for the initial examination. Mauer (1946) applied this procedure to the development of preschool tests, specifying that items to be included in the preschool measure must have a demonstrated correlation with intellectual status at maturity. A longitudinal research design is an obvious necessity for a study of this kind. Although Maurer's technique might appear to solve the predictive problem, later analyses by Bayley (1955) on infants indicated that the relationships were not as strong as one would like, and also that they held more for girls than boys (Cameron, Livson, and Bayley1967).

A methodological lesson from Maurer's study was that functions assessed early in their appearance in the response repertoire of children did not fare well as forecasters of later performance. The best items tended to deal with functions that had achieved a more or less steady state in the behavioral potentialities of her subjects.

Kinds of Intelligence

The developmental cycle of intellectual growth may be examined from the standpoint of process and level as well as from the standpoint of psychometric differentiation and covariation. In this vein R. B. Cattell (1941) has proposed a theory of fluid and crystallized intelligence. Fluid intelligence is relatively independent of experience and education, although it follows a developmental gradient over time. It can enter into any form of intellectual activity or problem-solving, but is most clearly tapped by measures of induction, figural relations, span of apprehension, and reasoning. Crystallized intelligence is more a precipitate of experience, resulting from the interaction between fluid intelligence and the demands and guidelines of the culture. It can be assessed by measures of verbal comprehension, general information, and numerical ability. The growth gradients of fluid and crystallized intelligence are different, as might be expected, (Cattell, 1963; Horn, 1967; Horn and Cattell, 1967). Fluid intelligence peaks in late adolescence, whereas crystallized intelligence reaches and remains at an asymptote in adulthood. Tests measuring mixtures of fluid and crystallized intelligence will show earlier or later peak points depending on the predominance of items assessing fluid abilities.

Hebb (1949, p. 294) proposed a somewhat similar distinction in his concepts of intelligence "A" and "B":

> . . . it appears that the word 'intelligence' has *two* valuable meanings. One is (A) an *innate potential*, the capacity for development, a fully innate property that amounts to the possession of a good brain and a good neural metabolism. The second is (B) the functioning of a brain in which development has gone on, determining the *average level of performance or comprehension* by the partly grown or mature person.[3]

Hebb pointed out that inferences about intelligence A must be drawn from tests of intelligence B; the dependability of these estimates will in turn rest on the degree to which environmental factors influencing performance of type B are precisely known and assessed. Inasmuch as the specific influences of most environmental variables are not known, intelligence A is in effect an indeterminate concept.

The A-B distinction has been extended one step by Vernon (1955). He viewed Intelligence A as equivalent to the geneticist's genotype – a basic part of the inherited potential of the individual, but never directly observable. Intelligence B corresponds to the phenotype, something manifested in behavior and response, and not fixed or static for life. It may be regarded as a name for the cluster of cognitive skills that are developed in and valued by any particular culture. In the Western world these skills are largely verbal and symbolic, and they relate to school achievement and performance in other settings where abstract thought is stressed. The Stanford-Binet test and its offshoots afford good measures of intelligence B. Intelligence C pertains to abilities and skills tapped by tests of other kinds, such as those intended for use in practical and job-related situations.

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Intellectual Processes

The developmental notions concerning intelligence that have been discussed up to this juncture are largely incremental; that is, they view intelligence as a gradual accumulation of skills and abilities that become more differentiated over time and that represent different degrees of abstraction and specificity. It is also possible to view the developmental sequence as one of successive hurdles, in which mastery of certain kinds of problems must be achieved before advancement to the next level of development is possible. Piaget's (1950, 1952) analyses are of this second type. His theories define a developmental model in which there are three major periods of intellectual progress. In all periods the growing child interacts actively with his environment and in so doing evolves and modifies the representational schema necessary to cope with his experiences. *Accommodation* is the team used to refer to these modifications, and *assimilation* is the term referring to the internalization of the environment by means of schema. *Adaptation* is then the proper interplay of accommodation and assimilation.

The first developmental period is one of sensorimotor or practical intelligence, extending roughly up to age two. Key concepts such as that of object constancy are established by viewing, touching, and manipulating objects from different perspectives and in different orientations. The second period has two major subdivisions, the first being a phase extending from age two to about age seven. Language and symbolic functions develop, and relationships that earlier had to be represented physically can now be dealt with in imagery and thought. However, these representations are still close to action, and are primarily concrete and egocentric. During this phase the child is unable to decenter – to focus on more than one aspect of a problem at a time – or to reverse the sequence of relationships. In the next phase, that of concrete operations, concepts of transitivity and interation appear and notions concerning the conservation of mass, weight, volume, and number are developed. In the third period of formal operations, beginning about age 11, the child starts to conceptualize problems in a formal manner and to think inductively.

A discernible theme in each of these developmental stages is the ability to overcome or cut through misleading appearances. A parent in stage 1 comes to be recognized as the same person when seen in different attire, in different places, and at different times of the day. In the preoperational phase of stage 2 the child can distinguish between the word and the object the word desginates. In the phase of concrete operations the child can recognize that the amount of water in a container is not reduced by pouring it from a tall to a short glass. In the final period of formal operations he becomes able to see the general behind the particular. A specific example of this growing ability to set aside error-inducing cues is found in illusions (Paiget, 1969). On the Miller-Lyer illusion, for example, the difficulty of the preoperational child in decentering concentrates too much attention on the total gestalt of the figures and the illusory effect is enhanced. Later, when he can decenter, he can scan and isolate the line segments and the magnitude of the illusion is diminished.

Paiget's ideas constitute, it is clear, a hierarchical model of intelligence in which the skills and talents on a lower level must be mastered and consolidated before problems from the next higher level can be solved. This ontogenetic sequence is characterized by Jensen (1971a, p. 39) in the following way:

> Paiget and others have demonstrated that children's thinking is not just a watered-down or inferior approximation to adult thinking; it is radically and qualitatively different. The stages of mental development form an invariant sequence or succession of individual development. Each stage of cognitive development is a structured whole; mental development does not consist of the mere accretion of specific stimulus-response associations. Cognitive stages are hierarchically integrated; higher stages reintegrate the cognitive structures found at lower stages.[4]

Bruner (Bruner, Olver, and Greenfield, 1966) has also proposed a hierarchical model of cognitive growth, in which there are three levels of information processing skill. The first of these is termed enactive, and implies adaptation at the motoric level. In the *enactive* mode a child acquires the capacity to move in space, to deal with tangible objects, and the like. In the *iconic* mode he views the world by way of percepts and images, but does not evolve higher-order relationships. If one of two equal balls of plasticine is flattened out he no longer sees them as having the same mass, as he cannot relate mass to thickness and circumference. In the *symbolic* stage he has acquired more general and abstract notions and can express relationships in words or numbers. Sheldon White (1965) has put forward a similar formulation. He distinguishes between associative thinking, largely concrete and the predominant from up to ages five to seven. This is followed by a cognitive mode, in which thinking is more abstract and generalizable. In older children and adults both forms of thought are present, with the cognitive mode superordinate.

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Although Piaget and his followers have been more interested in normative issues than in individual differences (cf. Tuddenham, 1970), and although the *méthode clinique* for examining a child is hard to reconcile with the objectivity and standardization required by the canons of measurement, tests in the Piagetian tradition have been developed and are being applied. However, the devices are used by different investigators vary even more widely among themselves than do conventional tests of ability (Cronback, 1970, p. 244), making generalizations difficult. Tuddenham at Berkeley has been experimenting with a set of some 25 problems, administered to approximately 500 school children in kindergarten and the first four grades; inter-item correlations were positive, although not as high as the median values for Stanford-Binet items within a given age-range. The items revealed moderate increments by age and grade, but Tuddenham (1970, p. 70) expressed doubts that a reliable mental age continuum could be established for his device. Goldschmid and Bentler (1968), Goldschmid et al. (1973) have also studied individual differences with Piagetian tasks and have published an assessment kit for conservation suitable for use with children of ages four to seven. Piagetian items are to be included in the New British Intelligence Scale now under construction (Ward and Fitzpatrick, 1970).

Where Piagetian tests have been related to conventional measures of ability positive findings have usually been obtained. Goodnow and Bethon (1966) compared conservation of volume tests with chronological age and mental age as assessed by the California Test of Mental Maturity; 28 per cent of the children in the lowest mental age category passed the volume test whereas 75 per cent of those in the highest MA category were successful. Another study (Dudek, Lester, Goldberg, and Dyn, 1968) found a battery of nine Piagetian tasks to surpass the Wechsler Intelligence Scale for Children and Lorge-Thorndike Group Intelligence Scale as a forecaster of first grade achievement.

Problems of Definition and Prediction

One of the continuing difficulties in research on intelligence is to decide how the term should be defined. There is always a danger that the basic behavioral referent – meaningful and appropriate problem-solving – will be lost from sight, and that the concept will be reified into some sort of abstract entity. As Chein (1945) pointed out nearly 30 years ago, intelligence is an adverbial concept pertaining to the quality of observed behavior, not an adjective or a noun. The conditions of intelligence, as it were, may be noted in the person whose behavior is classified as intelligent, but the defining properties of the concept must always be found in the behavior itself and not in the attributes of the individual whose behavior is observed. The philosopher Ryle (1949) made somewhat the same point when he stated that in describing people as exercising qualities of mind one is not referring to "occult episodes" of which their acts and utterances are effects, but rather to those overt acts and utterances themselves.

These comments may at first sight seem as abstruse as the fuzzy thinking they are intended to clarify. Perhaps a few illustrations will help to bring things into better focus. A great deal of the writing on intelligence refers to something like the "ability to think abstractly" as the key element. From whis it would follow that the more abstract the thought the greater the intelligence. But this is absurd as it would place the autistic fantasies of the schizophrenic on a higher plane than the down-to-earth problem-solving of everyday life. As Chein (p. 114) remarks, "of two people confronted with the same problem, not the one thinking most abstractly, but the one thinking most to the point is thinking most intelligently. It is not the degree of abstraction in thought but its quality that makes the difference." In practice, this means that the validity of any testing procedure must be confirmed by its success in forecasting problem-solving behavior in the context or milieu in which the instrument is to be applied. An instrument can be used in more than one setting, or culture, if and only if performance on the test is predictive of effective coping with the problems posed and defined by the folkways and imperatives of the different cultures. Logical analysis thus leads to a dictum fully in accord with the conclusions of cross-cultural researchers such as Berry (1972), Cole, Gay, Glick, and Sharp (1971), and Wober (1969).

Another difficulty is that the tests do not forecast nontest performance as accurately as one would like. For example, a survey in the early 1960s (Gough, Hall, and Harris, 1963) of the validity of the Medical College Admissions Test – a test required of applicants to all American medical schools – found near-zero median correlations with grades in medical school, faculty ratings of clinical proficiency, dropout, and performance as an intern. A more recent survey (Gough, 1971) indicates that the picture is still essentially the same. These discouraging findings cannot be explained away by statistical notions such as restriction of range or infinitesimally small selection ratios. Admitted students reveal the full range of possible scores on the test battery, with no gaps or depressions at presumed cut-off points. With regard to the selection ratios, in the 14-year period 1952-67 a relatively constant figure of 50 per cent (Gough, 1971, p. 21) was maintained. The popular impression of hordes of applicants being turned down results from the fact that the average candidate is now applying to from 20 to 30 schools. Given a mean number of applications per candidate of 25, a two per cent acceptance rate by the schools would lead to a 50 per cent acceptance rate among the candidates. With only five applications per candidate, an overall selection ratio of one in ten by the schools would result in the admission of half of the applicants.

The problem of validity is coming under increasing scrutiny. David McClelland (1973, p. 1), for example, makes the following statement:

> Why should intelligence or aptitude tests have all this power? What justifies the use of such tests in selecting applicants for college entrance of jobs? On what assumptions is the success of the movement based? They deserve careful examination before we go on rather blindly promoting the use of tests as instruments of power over the lives of many Americans. The key issue is obviously the *validity* of so-called intelligence tests. Their use could not be justified unless they were valid,

> and it is my conviction that the evidence for their validity is by no means so overwhelming as most of us, rather unthinkingly, had come to think it was.[5]

McClelland argues that whereas intelligence and aptitude tests may forecast grades in school, they are much less successful in forecasting "grades in life" — the effectiveness of behavior in coping with the demands of everyday living.

Another of the shortcomings of most intelligence and aptitude tests being brought to light by current research is their minimal relationship to creativity in the arts and sciences (cf. Barron, 1965; Getzels and Jackson, 1962). In one of the most thorough analyses of this issue yet carried out, MacKinnon and Hall (1972) obtained Wechsler Adult Intelligence Scale scores on samples of 88 architects, 60 mathematicians, and 37 scientists and engineers. The correlations between the WAIS and ratings of creativity within each of these samples (Hall, 1973) were .20, +.02, and .16; for the total of 185 *Ss* the coefficient was .11. There was a moderate restriction of range in the sample, with standard deviations of 6.7, 7.9, and 6.5 for the three groups separately, and 7.2 overall, as compared with the norm of 15 set for the deviation IQ. The individual IQ's went from a low of 107 to a high of 151, with a mean of 131. From the MacKinnon and Hall investigation one can conclude that intelligence as ordinarily assessed has very little to do with the degree of creativity displayed by working professionals in architecture and the natural sciences.

Given findings such as those mentioned above it is to be expected that people-in-general would entertain doubts about the utility of intellectual measures. In 1961 the Russell Sage Foundation (Goslin, 1963) initiated a series of inquiries on the social consequence of standardized intelligence testing in the United States. In one report (Brim, 1965) a survey of *Ss* over 18 years of age found 37 per cent to oppose use of tests in job selection, 41 per cent to oppose use of tests to select students for college, and 50 per cent opposed to using tests to help decide on promotions at work. Even in regard to establishing special classes at school almost 25 per cent voted no. Among high school students, 54 per cent thought it unfair to use tests to help choose students for admission to college.

Part of this opposition to testing comes from philosophical and ideological concerns unrelated to the technical validity of the instruments, for example, objections to invasion of privacy, resentment concerning the customary inaccessibility of scores to the person tested, and complaints about rigid practices in test interpretation as a result of which an unreliably determined IQ in grade school can be carried in the records as an ultimate truth all the way up to high school graduation and beyond. But part of the opposition also comes from appreciation of the fact that the tests are defective as predictors, and that they may be biased against persons of atypical social background. This last issue is being vigorously, even acrimoniously, debated in contemporary writing as an aftermath to Jensen's (1969) now-famous analysis of race differences and to subsequent publications by Eysenck (1971) and Herrnstein (1971). See, for example, Deutsch (1969), Page (1972), and Richardson, Spears, and Richards (1972).

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In cross-cultural measurement problems of predictive validity have long been noted, and researchers have been cautioned to be on guard against fallacious generalizations from test to nontest performance. F. C. Bartlett's (1937, pp. 413-414) comments on the results from eight tests administered to *Ss* in Tanganyika are worth repeating:

> Every one of these tests, except No. 4, was failed repeatedly by natives who, in their everyday life, constantly and successfully performed activities involving precisely the principles of the test. No. 4 was so 'easy' that nobody ever failed, and consequently it could not be used to discriminate one native from the others.[6]

More recently, Cole (1974) has put the same issue in the context of *Ss* who fail the water conservation tasks on Piagetian tests:

> . . . I am left wondering about the cognitive status of people who do not conserve. Consider, for example, research done among people who live in semi-arid locations where severe water shortages occur from time to time and natives' abilities to find scarce water are legendary (e.g., aborigines). Are we to believe that aborigine adults will store water in tall thin cans in order to 'have more water' . . . do they think they lose water when they pour it from a bucket into a barrel? I am tempted to believe that they would have disappeared long ago were this the case . . . Yet is we are to extrapolate the

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> interpretations of poor performance from Genevan children to aborigine adults . . . what else can we conclude?[7]

Cole then cites Heron's (1971) study in which performance on a Piagetian task failed to correlate with mathematical performance which takes for granted the very operations assessed as lacking by the test.

Issues of Particular Concern to the Cross-Cultural Tester

We should now turn to issues of more direct and immediate concern to cross-cultural researchers. A first admonition is that ability testing must be directed to those skills and operations required for attainment in the culture in which the test is to be used, and we may take the statement by Brislin, Lonner, and Thorndike (1973, p. 111) as our guide: "If the aim is to assess the mental ability of people in a culture that has yet to develop its own testing scheme or system, it is necessary to assess what is important in and for that culture." Wober (1969) puts the matter a bit more succinctly in his contrast between "centri-cultural" and "cross-cultural" testing: in the former one asks "how well can we measure how *they* do *our* tricks," whereas in the latter the question becomes "how well can we measure how *they* do *their* tricks?" Cole, Gay, Glick, and Sharp (1971, p. 217) offer a third variant of the root idea when they state that ethnographic analysis should be made prior to experiment "in order to identify the kinds of activities that people often engage in and hence ought to be skillful at dealing with." Or, in the language of Pike (1966) and Berry (1969) an *emic* approach should be adopted, in which the goals, constraints, and conventions of a culture serve as the referents for intelligent behavior, rather than an *etic* approach in which categories and standards are externally imposed.

These considerations bear on what were at one time called "culture-free" tests of ability and more currently culture-reduced or culture-fair examinations (cf. Brislin, Lonner, and Thorndike, 1973, p. 109). Early efforts, to some extent in conflict with the recommendations of the preceding paragraph, sought testing materials unfamiliar and unknown to respondents anywhere, so that prior experience would be equated by virtue of being canceled. Cattell's (1940) test of figural analogies and figural reasoning is a good example of this approach, and the Raven's matrices first introduced by Penrose and Raven in 1937 is another. An equally logical procedure, however, is to utilize nonverbal test stimuli known to everyone and which draw on an extensive fund or childhood experience (cf. Gough and Domino, 1963, p. 344). This approach would also be consonant with the inference from Maurer's work that well-rehearsed skills are more valid indicators of later performance than responses still in an inchoate state. The D48 test (cf. Pichot, 1949; Kagitcibasi, 1972), based on the near-universal game of dominoes, is an example of this alternative procedure. Another example is the draw-a-person test, if scored for local conventions for local conventions of dress and attire.

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[7] This excerpt from "Cross-Cultural Perspectives on Learning," by R. W. Brislin, S. Bochner, and W. J. Louner (1974) is from the chapter by M. Cole and is reprinted by permission of the Publisher, Sage Publications, Inc., Beverly Hills, Calif.

Lambert (1964) evaluated the status of culture-fair testing and came up with some trenchant observations. One is that persons responsible for help and guidance are not always as enthusiastic about culture-fair examinations as are the testers. For example, a Navajo educational consultant in New Mexico made the remark "we are interested in what makes these Indians unique, but when it comes to determining how they will do in school, we need measures of scholastic potential, not culture-fair tests." Biesheuvel's (1952) studies on selecting mine workers in South Africa also stressed the need for the prediction of designated criteria. A pervasive problem in culture-fair testing devices, Lambert concluded, is their relative weakness in forecasting specific outcomes.[8]

A second comment is that just as cultures and subcultures may differ in the intellectual behaviors demanded for attainment, so may they differ in the degree to which different kinds of ability are fostered. A long tradition of anthropological study of visual perception may be cited in support of this contention, from the pioneering work on illusions by Rivers (1901, 1905), through Hudson's (1960, 1967) analyses of pictorial depth perception, through the more recent studies of illusions by Segall, Campbell, and Herskovits (1966), down to a whole series of experiments on field independence by Witkin and others (cf. Dawson, 1967; Witkin, 1967; Wober, 1967). Thus, two-dimensional drawings of three-dimensional spatial problems, while valid in the West may give invalid evidence elsewhere, and ambiguity in expressing ideas – a "deficit" in some cultures – may be a highly-valued and stylized art in others (Cole, 1974).

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[8] The "culture-fair" problem involves more than the finding that two groups have significantly different means on a test of ability or aptitude. Such a finding, in fact, is not by itself evidence for either "fair" or "unfair" testing. To establish that a test is unfair, the nature of its bias should be identified, and then it should be shown that the difference between the two groups is less or nonexistent on a new test from which this bias has been excluded. Also, even on devices where means are consistently discrepant, "fairness" resides in the use and interpretation made of scores on the test (cf. Humphreys, 1973; Thorndike, 1971). For example, a cutting point on a test to identify applicant whose job performance is good may be set at one score for Group A and a different score for Group B. These two cutting points will therefore be "fair" – given the circumstances of testing – even if there is an "unfair" difference between the average scores of applicants from the two groups. The validity of this example, of course, rests on two assumptions, viz., that within each group test scores are similarly correlated with job performance, and that the cutting points are empirically established so as to yield comparable hit/miss ratios in the two groups.

A third observation is that personality and temperament interact with ability and affect the way in which intelligence will be manifested. Cattell (Cattell and Ever, 1962), for example, includes a measure of intellectual functioning in his 16PF personality inventory, and the California Psychological Inventory (Gough, 1957); also a self-report instrument, contains a scale for "intellectual efficiency." The Rorschach Ink Blot test (Rorschach, 1942), ordinarily thought of as a device for assessing personality, has from the beginning paid attention to intellectual phonomena such as the capacity to organize stimuli into meaningful wholes, to analyze components within a gestalt, and to express imaginal processes. Personal dispositions such as self-confidence, assertiveness, and "independence" are critical covariants of performance on the rod-and-frame and embedded figures tests (Witkin, Lewis, Hertzman, Machover, Meissner, and Wapner, 1954). Sex differences favoring males on Witkin-like tasks have repeatedly been demonstrated (cf. Bieri, Bradburn, and Galinsky, 1958; Sherman, 1967), and Vaught (1965) found that for both males and females a personality scale for femininity had significant negative correlations with performance on the rod-and-frame. The spatial factor that appears to enter into performance on these tasks (cf. Vernon, 1972) is worth noting, as this is the only factorial dimension of intelligence for which sex-linked genetic origin has been hypothesized (cf. Bock and Kolakowski, 1973; Hartlage, 1970; Stafford, 1961).

Unless factors of disposition and temperament are taken into account by the evaluator, incorrect inferences may be drawn. Cronbach (1970, p. 247) cites an example:

> The Zuni Indians, however, teach cooperation rather than competition. Zuni

> children have races. But a child who wins several races is scolded for having made others lose face. He is taught to win some races to show he is capable, and then to hold back and give others an opportunity to win. White teachers sent Zuni children to the blackboard for arithmetic drills, with instructions to do a problem and turn their backs to the board when finished. Instead, the pupils faced the board until the slowest had finished, then all turned. This was to them simple courtesy; in their eyes the teacher had asked them to show off.[9]

In their book on cross-cultural research methodology, Brislin, Lonner, and Thorndike (1973, pp. 117-120) give an impressive list of do's and don't's for the cross-cultural tester, the purpose of which is to hold in check factors that could otherwise lead to false findings and misleading conclusions.

Lessons and Guidelines

One of the lessons to be learned from 75 years of assessing intellectual and cognitive abilities is that evaluational criteria should be applied to the items within a test as well as to the test itself. If a test is intended to forecast differential attainment in school work, then the items within this test should be held to this same standard. If a test is to reflect growth of competence during the pre-adult period, then its items must likewise reflect growth. If a test is to be theoretically interpretable as a measure of hypothesized or defined functions, then its items must be thereotically interpretable. Few if any tests now in use meet all three of these specifications.

Let us look first at the second criterion – the desirability of finding items manifesting age-developmental gradients. Binet and Simon, it will be recalled, put great stress on this attribute of their items and current tests in the Binet tradition do the same. But what of a test constructed by internal consistency or factorial technique, in which the only consideration regarding an item is its correlation with other items? For such a test the finding of an age-developmental gradient would be a matter of mere good fortune. The issue here is what Bart (1971) has called the "linear order of difficulty." The ideal is to work only with items whose linear order of difficulty, by age, is universally invariant, i.e., across all cultures. Binet and

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Simon established age gradients for the children of Paris; but for test construction in the 1970s gradients should be established for the children of the world. Lest this seem too utopian a possibility we should remind ourselves that the Piagetians are seeking to do no less.

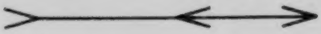
In the perceptual realm the methods proposed by Witkin and others to assess field independence or field articulation appear promising from the age-developmental standpoint (cf. Witkin, Goodenough, and Karp, 1967). Handel (1972) recently reported a study of 563 boys in Israel, ages 7 to 11, with IQ's matched for level at each age. A correlation of -.27 was obtained between chronological age and the logarithm of rod-and-frame errors in degrees. Settings were also obtained for the rod only, i.e., without the background of a tilted frame; under this condition the correlation between age and errors in the adjustment of the rod to verticality was -.12, and the correlation between errors with frame present and frame absent was -.16. The two error scores are clearly not neasuring the same function. From the point of view advocated in the discussion, the rod-and-frame testing method is a better indicator of intellectual functioning than the rod-test alone.

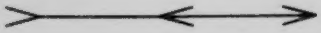
Ability to overcome the error-inducing attributes of illusions has generally shown increases with age (cf. Dawson, Young, and Choi, 1973; Wohwill, 1960), although there may be "flare-ups" of erroneous responses at the time of puberty (Walters, 1942), and certain types of illusion such as the Ponzo show an increasing degree of error with age (Leibowitz and Heisel, 1958). In later life (age 60 and over) accuracy in perceiving visual illusions begins to diminish (Eisner, 1972).

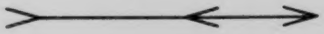
Gough and McGurk (1967) published a standardized multiple-choice test of geometric forms, including 25 items based on illusions such as the Muller-Lyer, vertical-horizontal, and Titchener circles, and 5 non-illusion items that correlated significantly with the core cluster of geometric illusions. Subsequent applications of this 30-item series in France (Gough and Hug, 1968), Italy (Gough and Meschieri, 1971), Switzerland (Gough and Delcourt, 1969), and the Fiji Islands (Chandra, 1972), gave rise to significant correlations with chronological age in all four instances; for example, in Chandra's study of 193 *Ss* ages 15 to 20 the coefficient was .26, approximately the same as the coefficient of -.27 reported by Handel for rod-and-frame errors and age.

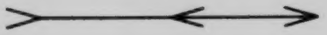
These figures refer to total performance on the test. Following the advice given a moment ago, individual items were also evaluated against age. In a composite sample of 3,142 *Ss* from testing in Europe and the United States, mean age = 16.8, standard deviation = 8.2, one of the Muller-Lyer items showing a significant correlation with age (r=.18) as well as with total score on the test (r=.34) has been selected for illustration in Figure 1. The correct

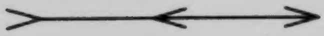
20. Choose the figure in which the point of the center arrow cuts the horizontal line exactly in half.

A


B


C


D


E


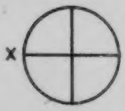
answer for this item (no. 20 in the test) is "A", for which 2 points are given. Options B and D also reveal a statistical relationship to total score, and are therefore given weights of 1. No points are given for choices C and E.

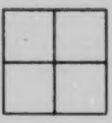
Figure 2, item 27 in the test, is a moderately promising example according to the criteria being advocated. It correlates .14 with age and .30 with total score on the series. The correct answer is D, for which 2 points are given. No points are given for any other choice.

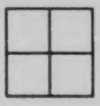
On the theoretical-classificatory issue of the degree to which performance on this visual perception test relates to the Witkin field-independence domain it can be reported that in a sample of 264 college students the "PAT" correlated .30 with an embedded figures test, and in a sample of 47 it correlated -.41 with error score on the portable rod-and-frame (Gough & Olton, 1972).

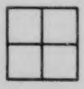
Returning to the three basic criteria suggested above, a few comments are also in order concerning the first, the

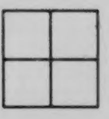
27 Choose the figure whose inner cross is the same size as the inner cross of figure "X".

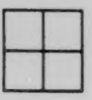
X


A


B


C


D


E


degree to which test *and* items relate to significant internal and external variables other than age. Hundreds if not thousands of tests have been constructed according to the doctrines of internal consistency, i.e., by choosing those items correlating most highly with an initial total score or with a subset of the items defined in factorial terms. Very few if any of these tests, however, have examined items to see if they by themselves correlate with the external criteria the full test is intended to forecast or estimate. In a moment an example will be given of an interesting finding that occurs when this kind of examination is made.

Another aspect of the correlational problem is to consider patterns and regularities among the mistakes that occur. From the standpoint of analyzing intellectual activity it is as important to know why mistakes are made as to know how and why correct responses are produced. "Failure" on an item or test can spring from many sources, only one of which is a deficiency in the competence the test is intended to appraise. Irvine (1969) recently published a very interesting paper in which this topic was considered. Working with 30 of the subtests from French, Ekstrom, and Price (1963) factorial reference kit administered to an African sample, he noted inconsistent correlations between the patterns of right and wrong answers; from this he inferred that the same set of factors should not account for both correct and incorrect responses. Wrong answer tallies on 22 of the tests were factored, giving rise to eight dimensions: these were in turn analyzed giving rise to three second-order factors. The first was a composite of numerical facility and memory, the second an analytic disposition having both verbal and perceptual components, and the third a stylistic preference for scanning as a final step towards problem-solving. From these and other findings Irvine came to the conclusion that Western models of the structure of intellect are not adequate as descriptors of non-Western cognitive processes.

The "error problem" was also noticed in analyses being carried out in one of our programs at Berkeley. During the past 20 years the entering graduate students in psychology have been asked to participate in an experimental testing project whose intention is to compare test findings with later outcomes such as receiving the Ph.D. degree versus dropping out, rate of progress toward the degree, postdoctoral professional performance, etc. The battery has included certain "core" tests each year (such as the Strong Vocational Interest Blank) augmented by variable combinations of other instruments. One of these occasional devices was the 75-item College Vocabulary Test (Gough and Sampson, 1954), form B of which was given to a sample of 345 entering graduate students. At the time of the item studies in the summer of 1972, 167 of these students had taken the Ph.D., 176 had dropped out, and 2 were still enrolled. For 308 of these students scores were available on the Miller Analogies Test (furnished at the time of application), and for 296 there were undergraduate grade point averages.

To put things in perspective we should begin by observing that neither the Miller Analogies Test or undergraduate GPA had anything to do with the Ph.D. vs. dropout dichotomy. Recipients of the degree had an average MAT of 68.3, SD = 13.3, and dropouts a mean of 68.2, SD = 13.4. Psychologists who expect higher scores on the MAT should be informed that our selection committees pay little attention to aptitude tests like the Miller and Graduate Record Examination, having found that their predictive value is minimal; this is important in the present comparison because it means there is little or no attenuation of MAT scores, no ceiling effect, or similar artifact. Both recipients and dropouts had identical undergraduate GPA's, 3.5, with standard deviations of .30 for the recipients and .32 for the dropouts.

Things were not much better on the vocabulary test, with means of 51.8 and 50.6 for the two subsamples. An item analysis appeared to be called for, on practical as well as on theoretical grounds. What was turned up was the perhaps expected, perhaps unexpected, finding that although most items showed small differences in favor of the Ph.D. recipients a few showed reversals and some of these were significant at or beyond the .05 level. One example will be given:

	Number	Choosing
Item	Ph.D.'s	Dropouts
SELFLESS:		
Informal	1	0
disinterested	37	23
impulsive	4	1
unselfish	125	152

The difference in the proportion of *Ss* selecting the correct alternative (unselfish) is significant beyond the .01 level; this means that in this sample of 343 graduate students and on this item, answering correctly is a negatively prognostic event. This is in spite of the fact that psychometrically speaking the item has good credentials. In a cross-section sample of 970 undergraduates its difficulty level (per cent correct answers) was 61.2, and its correlation with total score on the test was +.36.

A testing skeptic can of course cast doubt on this example saying "mere sampling error" and "let's wait for cross-validation." I am a great believer in cross-validation and agree completely that before any item like this is put into practical use as a reverse forecaster it must be rechecked in new samples, preferably in new departments. But the fact that one finds reverse forecasters cannot so easily be put aside or swept unter the rug. Repeated evaluation of a large pool of questions might very well bring to light vocabulary and other items that although internally consistent with the psychometric properties of the test are negatively related to the criteria the test is intended to forecast. If such items are to be kept out of a test, or scored properly according to the examination's objectives, then individual items must be related to the nontest criterion just as the total measure will eventually be referenced.

The third imperative posited for items was that they should embody a rational formulation of intelligence in action. It might be found, for example, that efficiency in using an implement for eating (for instance, fork or chop sticks) was correlated with both age and quality of work at school. But a performance "item" based on eating, say, a plate of spaghetti, would be an unpersuasive candidate for a test of ability, as the skill involved does not seem to be very intimately related to what a concept of intellectual functioning implies.

From this functional standpoint I would propose three aspects or manifestations of intelligence that should be assessed separately: *first,* accuracy in the perception or apprehension of the stimulus field; *second,* power and facility in conceptual ordering and reordering of stimuli or elements; and *third,* efficiency in the storage and retrieval of information. A minimal diagnostic test battery – i.e., one attempting to assess essential components of cognitive topology – should contain subtests for each of these functions. More briefly stated, the three categories may be described as the perceptual-analytic, conceptual, and memorial facets of intellectual functioning. These os similar distinctions have been made by others, it should be noted. For example, Guttman (1965) has emphasized the wisdom of separating measurement of information processing and information retrieval (categories 2 and 3 in my proposal), and Jensen's (1971b) contrast between non-transformational and mediational processes carries some of the same implications as the distinction I am making between categories 1 and 2.

What kinds of items and tests can be mentioned so as to illustrate more explicitly what is intended by each category? The rod-and-frame, embedded figures, geometric illusions, block design, and some of the Piagetian conservation problems afford good examples of what is envisaged by the first. Induction on Raven's matrices, comprehension on the WAIS, and verbal analogies illustrate the second. Tests of information and word knowledge represent the third.

Practical constraints are also important. One of these is that insofar as possible the testing materials should be cross-culturally applicable. Another is that they should be easy to administer and score. A third is that the items should be reasonably interesting, so that persons taking the tests will respond favorably and be prompted to do their best.[10]

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[10] Jahoda's (1966, p. 194) observation on using the Muller-Lyer and vertical-horizontal illusions in Ghana may be cited here: "The pilot exercise clearly showed the need to keep the number of trials demanded of any subject to an absolute minimum. The tolerance of illiterates for a strange task, whose purpose is obscure, is limited; unless one has some special clain on their cooperation, fatigue and boredom set in fairly soon and the performance then becomes perfunctory.

In the perceptual-analytic sphere some of the tests already mentioned appear to meet both theoretical and practical desiderata. For example, the Witkin tasks show age-developmental trends, are related to nontest indices of effective performance, and are cross-culturally applicable. In the second category, however, new testing material would be useful. Items calling for the application of conceptual and classificatory thinking to presumably universal experiences of everyday life would be of particular value, if indeed such items could be found.

I have been initiating some very preliminary work along this line, drawing on Guttman's (1965) facet theory to define item formats. In a facet item a brief list of easily recognized elements gives rise to a concept or class in which each can be included; then in the options to follow either one and only one can also be assigned to this class, or all save one can be so assigned.

Let us consider one example of each item type:

1. Eye, ear, tongue, and
   - a. foot
   - b. hand
   - c. chin
   - d. nose

The three defining elements – eye, ear, and tongue – are universally known parts of the body, no doubt named and distinguished in all languages; the same would hold for the four options. Thus no one given this item would see it as alien, American, opposed to his own experiences, etc. It is also short, easy to present, and can be given orally as readily as in writing. The problem-solving it requires is the induction of a class in which a facet or facets from all three definers can be housed. Two such classes can quickly be noted: located on or in the head, and serving as a sensory receptor. Among the options, both chin and nose qualify under the first induction, but only nose under both. Nose is therefore the designated answer.

A second example is:

2. Mother, father, sister, but not:
   - a. brother
   - b. grandfather
   - c. grandmother
   - d. friend

The class presumably generated by the three definers is familial; options a, b, and c fall in the class whereas d does not; d, therefore, is the designated response. This item, it is recognized, might not be relevant in cultures where consanguinity and family ties are defined in an atypical manner.

The goal in writing items of this type is to sample inductive and transformational thinking as applied to everyday objects and experiences; this is another way of saying that a valid test item must reflect an articulated conception of intelligence in action. But before any such item is included in a testing device it must also pass muster according to the other two criteria; i.e., it must be shown to be age-related and to be correlated with other items and with significant nontest performance. An acceptable item, in other words, must be age-related, criterion-related, and theory-related.

The third category (information storage and retrieval) is probably the most difficult in which to find or write items capable of being used in cross-cultural study. It is conceivable that in a three-part battery (assessing perceptual-analytic, conceptual, and memorial functions), only the first two sections would include standard instruments ready for use in all or nearly all settings; to assess information and knowledge, local or particular examinations might be required in each new application.

However, even under a particularistic constraint it would appear desirable to derive the testing material from everyday life and experience, instead of from special environments or educational levels denied to segments of the population. Information items, for example, can be based on food preferences, cultural lore, myth, religious beliefs, folk traditions, musical and artistic expression, and other facets of daily life in which everyone shares simply by virtue of being a member of a group or culture with defined locus. In the Northern hemisphere this might include questions about the seasons in which various foods become available, specifics concerning folk heroes, distances from one well-known place to another, and the like. A vocabulary test, similarly, can as well be based on words with a high frequency of usage in both written and oral language as on terms drawn from restricted and even exoteric environments.

My discussion began with a reference to "varieties of intellectual experience," a paraphrase of the title of a book by one of philosophy's great pragmatists (James, 1902). In closing, I should like to return to this notion of variety. In measurement we wish to deal with those aspects of intellectual functioning and experience that are elicited and called into play by the circumstances and demands of everyday life. By definition, these are the functions that make a difference in the lives of ordinary people, of mankind-at-large. To be sure, special tools will be needed for special tasks, such as identifying creative and unusual talent in particular domains of intellectual endeavor. Measurement's first responsibility, nevertheless, is to furnish valid, reliable, and easily applied tools for assessing problem-solving abilities found and required everywhere that people live and work together.

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Varieties of Cognitive Competence in a Cross-Cultural Context:

Comments on Harrison Gough's Paper

Karl and Ana Holzmuller

Professor Gough has presented a concise yet thorough summary of the historical development of intelligence as a concept and of the varieties of methods used in its measurement. The fact that this particular construct has maintained a seventy-year prominence within the mainstream of Western psychological research and theory has resulted in a wide-ranging diversity of approaches and instruments. Consequently, it is a somewhat difficult task to trace the lines of influence, but by organizing his discussion around two broad categories, Gough has provided us with a comprehensible framework from which to view a potentially confusing morass of tests and definitions. These two relatively distinct orientations are the topological, descriptive mapping of mental components begun by Galton and Cattrell on the one hand, and the pragmatic, predictive-tool devising of the Binet-Simon tradition on the other, whose descendents address themselves to specific social concerns and needs. One of the major contricutions Gough makes in his paper is the greater emphasis he places on the practical approach to the assessment of intellectual functioning, drawing on his own personal interest and acknowledged expertise in the field of psychological measurement. Our comments will start with a brief review of several of these considerations which are important to test construction and adaptation for the purposes of social comparative research. These comments will be followed by alternative conceptualizations of intelligence arising out of a unique cross-cultural perspective.

Gough states that "one of the lessons to be learned from 75 years of assessing intellectual and cognitive abilities is that evaluation should be applied to the items within a test as well as to the test itself" (p. 000). He then explains that tests typically have been constructed on the basis of internal consistency, that is, by correlating specific items with a subset of items derived through factorial methods or by correlating items with the total score. However, Gough argues that it is also necessary to ascertain whether the individual items of a particular test correlate with nontest performance, the relevant external criteria that the test as a whole have been designed to measure. The implications of this process for cross-cultural research are that adaptations of assessment tools for culture B which have been developed in culture A must be evaluated item by item in terms of the referent behavioral criteria. It is necessary but not sufficient to substantiate adequately linguistic and conceptual equivalence. Even if the test as a whole validly and reliably predicts nontest performance in two cultures, there remains the possibility that individual items may be positive forecasters in culture A while being negative forecasters in culture B, thus making cultural comparisons via tests quite difficult.

(For additional information on this point see Brislin, Lonner, and Thorndike, 1973, pgs. 25, 26, 114). Another aspect of test usage cited by Gough that needs to be emphasized is one that most cross-cultural researchers are taking into account. He states that "from the standpoint of analyzing intellectual activity it is as important to know why mistakes are made as to know how and why correct responses are produced" (p. 000), a ploy, we quickly point out, that Piaget and his adherents have exploited. Attention to regularities among mistakes can reveal useful information about the subject's cognitive structure. The normal procedure for Piagetian researchers is to take account of errors, which, in conjunction with correct responses, provide much of the needed information for indicating the level or stage of cognitive operations at which a subject is functioning. However, as Cole and Bruner (1971) note, mistakes may point to the inadequacy of the testing situation itself for the purposes of tapping underlying capacity. This is especially true when performance of everyday activities shows that the subject is able to use the skills required for proper completion of the test presented tasks (Heron, 1971; Cole, 1974). In terms of the construct validity of the instrument, Irvine (1969) has shown that inconsistent correlations between right and wrong answers could mean that different sets of factors are accounting for the two. From this it could be inferred that the model of the structure of intellect on which the test was based is inappropirate or incomplete for representing cognitive processes in another society.

A second criterion, one which Gough discusses at some length and one on which he places great emphasis, is the "desirability of finding items manifesting age-developmental gradients" (p. 000). According to Gough, those items which show a linear order of difficulty, by age, and that are universally invariant, should be isolated so that gradients can be established for the children of the world. While it is agreed that universal constructs are probably a worthy aim for cross-cultural psychology, our position is that this research should be carried out simultaneiouly with an "emic" approach (to be outlined later in these comments).

The third imperative Gough advances is the requirement that an item make intuitive sense in relation to the concept that it is measuring. Because performance on any item shows improvement with age or correlates with some external target behavior does not necessarily mean that it is automatically related to what Gough calls "rational formulation of intelligence in action" (p. 000). As he points out, test items should conform to this stipulation as well as to the previously mentioned considerations.

One of the critical problems associated with a construct such as intelligence, given its longstanding tradition in Western psychological science, is the ethnocentric biases surrounding its conceptualization and expectations of the character of its expression. For example, it is probably true that our cultural heritage dictates that intelligence be thought of as an entity, a "thing" that varies in degree or amount. Gough correctly implies that the British, or "g", mode of conceptualizing intelligence has done precisely that. This idea also stems from the pervasiveness of the intelligence quotient (I. Q.) which, it is assumed, can be quantified for every individual. This way of conceiving of intelligence has had its practical usages in our society, although it has been argued persuasively by Kamin (1973) that, historically, the I. Q. has many times been wielded as an "instrument of opression" against the underpriviledged (though there are many who do not fully agree with Kamin's analysis). While it is not within the scope of this paper to examine the issues raised by Kamin regarding the relationship between intelligence, politics, and psychology, it is clear that motivations, priorities and scientific "value free" stances need to be reexamined, especially when cultural comparisons are being made. Gough comments in his introduction that "whatever its flaws and defects, any device or institution that can remain viable over time spans of this magnitude (70 years) must have redeeming features" (p. 000). However, these redeeming features may reflect more on its usefulness to persons in decision and policy making positions such as educators, legislators and employers than on the merits of the concept itself. Moreover, it is precisely because intellectual measurement has achieved institutional status in our society that it may be impossible to strip it of its enthnocentric bias. For these very reasons, Berry (1972) has questioned the value of measuring intelligence, cross-culturally, at all. The danger of relying too heavily on our Western-based notion of intelligence is that it may be "obscuring alternative conceptions of cognitive competence" (Berry, 1972, p. 79).

The "emic-etic" framework proposed by Berry (1969) is possibly the only way in which alternative and culturally appropriate conceptions of intellectual functioning can be evaluated. At this state in cross-cultural research the concept of intelligence can most appropriately be thought of as an "imposed emic"; by this it is meant that it (intelligence) has been derived from studies within one particular social system and with criteria relative to the internal characteristics of that originating society. To transport the concept lock, stock, and barrel to a vastly differing behavioral context we have to assume that intelligence, conventionally viewed, is not too narrowly defined to reflect the variety of skills found worldwide. But the proper sequence of events, as outlined by Berry, is for researchers to describe the truly emic (and perhaps culturally idiosyncratic) and intellectual skills within single cultures first. The next step is that the emic description progressively alters the etic, or generalizable, category to the extent that processes in the culture under investigation come to be understood. If all of the etic content contributed by the previously studied culture is eliminated, this would indicate the inappropriateness of the description to this specific eco-social system. If, however, some of the etic is retained then this new "derived etic" can be transported to another culture where the emic-etic process is repeated. Eventually, the retained etic can become the basis for valid cross-cultural comparisons and can result in general statements about human cognition and behavior. Only after these steps have been taken can conceptually equivalent instruments for testing be developed and used. Both biological and social influences are exerting differing treatment effects on the peoples of the world and it is probably a safe assumption (although it raises an empirical question that must be answered) that differing demands will push the development of some cognitive skills while neglecting others. This is not to say that the members of some societies are operating at a less advanced level, nor is it advocating a position of environmental determinism. These are both conclusions that have arisen from time to time out of an exclusively Western discipline whose questions and interpretations interact implicitly with the values and assumptions of the culture at large.

As was mentioned earlier, Gough recommends in his paper that age-developmental gradients be established for the children of the world. This requires that assessment devices be composed of items whose "linear order of difficulty, by age, are universally invariant, i.e., across all cultures" (p. 000). Ths usefulness of age-developmental gradients to a science that seeks to come up with universal laws of behavior and with consistent regularities between variables is obvious. Still, there is a question concerning the best way to go about such a task. Do we yet know enough about the interactive relationship between the physical environment and social organization and how they both influence human cognition and behavior so that these "invariant" items can be selected without a trace of bias? Perhaps we need a more extensive ethnographic mapping of these relationships to fully understand intellectual functioning in its broadest perspective.

Dawson's (1969) so-called bio-social psychology can be helpful here. Based upon the organismic position of complexity of structure and functions, it has been designed explicitly for cross-cultural research. It incorporates a group survival theme which assumes that culture functions as a form of biological adaptation, a much more rapid means than by gene change. Selective pressures are brought to bear by ecological demands, and this ensures a continuation of those psychological skills most facilitative to group survival in a particular environment. This approach accepts value relativism as a given and does not evidence an interest in social comparisons for the purpose of spotting differences – differences the framework acknowledges. It makes no attempt to extract behavior from either the organism that produced it or from natural and human influences or contexts. The bio-social type of holistic analysis assures that cultures will be examined on their own terms only; again, here is the emic analysis. When assessing cognitive competencies that have arisen out of differing cultural experiences, Dawson's approach rests on the assumption that at this time and at the current level of sophistication in the discipline, the purpose should *not* be one of generating statements about the universal human condition. Succinctly, this approach postulates that the understanding of diversity and the recognition of its saliency at the level of overt processes is a necessary prerequisite for understanding how the *differences* in the forms that consciousness can take do not imply *deficiencies* in cognitive functioning. This can be done because the integrity of multilinear, feedback relationships has been preserved.

Another cross-cultural researcher, Michael Cole, has stressed the importance of not inferring deficits in underlying capacity from relatively poor performance shown in testing situations. Cole and his various associates (Cole, Gay, Glick and Sharp, 1971; Cole and Bruner, 1971; Scribner and Cole, 1973; Cole, 1974) have brought to cross-cultural psychology a sensitivity to the rich source of data that can be provided by ethnographic description. His "unorthodox ethnography" (his own label, see Cole et al., 1971) has emerged from a healthy skepticism of the "culture-fair" test movement and of "deficit" reporting by psychologists who have not availed themselves of information about the everyday lives of the people they study. Cole (1974) claims that these types of mundane data that are usually ignored or considered irrelevant to the experimental task at hand are often the only means by which the results of a particular experiment can be interpreted. The crux of Cole's ethnographic approach is the compatability of description and explanagion, or the necessary synthesis of the methods developed within anthropology and psychology. All culturally comparative research, if it is to produce interpretable and valid results, must represent a combined effort between the two disciplines. He implies that attributing a "value-free" characteristic to the experimental method in the behavioral sciences is inappropriate if one is acknowledging the fact that cultural values are implicit stimuli, initiating research and directing construct formation, as well as conclusions, about results. Once the value-free position is rejected, the burden of proof, so to speak, falls on the experimenter.

When, for example, a subject's performance on a conservation task indicates that he is not functioning cognitively at the concrete operational level, the psychologist is obligated to go beyond the designing and carrying out of the experiment; he must seek out those everyday experiences in the bio-social milieu that elicit concrete operations before he can assume that the subjects he is studying are preoperational in their thinking (Cole, 1974). Cole's work is addressed to the issue of distinguishing between experimental performance and underlying competence (ability) (Cole and Bruner, 1971). In this regard, Cole is stressing the need to consider the situation and content of the task in which the competence is expressed. In a series of studies comparing the Kpelle of Liberia and children and adults in the United States, Cole et al. (1968) demonstrated that familiarity with the units of measure and objects was the crucial factor in whether or not the Kpelle subjects performed as well as their United States counterparts. For example, if the volume measurement task was estimating amounts of rice, a familiar commodity in West Africa, the Kpelle subjects performed in a superior manner. The lesson to be learned from this is that when assessing cognitive competence in another culture and a particular experiment does not elicit the behavior it was intended to demonstrate, inferiority of underlying competence cannot be inferred. Rather, the difference is a contextual fact to be explained by further ethnographic study and explanation.

We feel that an understanding and appreciation of the similar positions advocated by Berry, Dawson and Cole is essential for future cross-cultural research – essential in the sense that if we, as Western psychologists, are to have any hope of divesting ourselves of our ethnocentric biases when dealing with other cultures we must be "cognitively flexible" enough to give up some of our cherished beliefs no matter how "useful" they have been to us in our own society.

Two related positions of cross-cultural research that have incorporated the environmental context to assess adequately the behavior and underlying competencies in question are those advanced by Herman Witkin and Mallory Wober. These will each be briefly discussed since they propose alternative ways of looking at cognitive functioning. These conceptions should be viewed as contrasting with the notion of comparing cultures in terms of "intelligence" as it is known in Western societies. Witkin and his associates (Witkin, Dyk, Faterson, Goodenough and

Karp, 1962; Witkin, 1967) are concerned with the general area of what they have called psychological differentiation. In essence, differentiation refers to the developmental process that proceeds from a relatively undifferentiated state in infancy to a state of greater differentiation as the organism matures. The bulk of Witkin's research along these lines has specifically dealt with the notion of "cognitive styles." Witkin (1967) describes cognitive styles as "the characteristic self-consistent modes of functioning found pervasifely throughout an individual's cognitive, that is, perceptual and intellectual activities" (p. 234). Investigations into the perceptual component of cognitive functioning have been concerned with the "global-articulated" dimension. One's perception is articulated, or field independent, if the parts of the field are experienced as discrete from the organized ground and if one can impose structure on a field with little inherent organization (Witkin, 1967). Contrastingly, in the global, or field dependent mode of perception the field as a whole dominates the perception of its parts (Witkin, 1967). This dimension of field-dependence-independence, is seen as a continuous one with individuals falling between the two extremes.

The import of this line of research in terms of a cross-cultural perspective that Gough's paper affords is that several studies have demonstrated that environmental demands and socialization factors are instrumental in bringing about differing modes of thinking and preceiving. These studies (e.g., Barry, Child and Bacon, 1959); Berry, 1966, 1967; Dawson, 1967a, b) are supportive of the "cultural relativity" positions outlined earlier in these comments. For example, when taken together these studies have shown that when societies are placed along a food accumulation dimension then certain relationships between ecological demands, social organization and cognitive-perceptual style can be evidenced. Using a method of contrasting extreme environments, these studies have demonstrated, for instance, that the dense, variegated vegetation of the Tmne habitat calls for child-rearing practices which stress cooperation and dependence which in turn foster a more global cognitive style. This is contrasted to the open, empty and homogenuous spaces of the Eskimo surround which calls for child-rearing practices stressing self-reliance and independence which then result in a more articulated cognitive style. One does not have to employ these Temne-Eskimo studies as "convincers" that this ecological-socialization dimension makes sense, however.

Ample evidence, too comprehensive to document here, strongly suggests that the Witkin strategy will yield similar findings even in multicultural North America.

Wober (1966) has pointed out in reference to the use of Witkin-developed tests of cognitive style that the tasks are primarily tapping visual perception. He notes that visual material is the primary mode of communication in Western society where the tests were developed. Working with a South Nigerian culture, Wober investigated two primary observations made previously by other researchers in other African cultures. One observation was that performance on visually specialized tasks tended to be poorer than in Western samples; the second tested observation was that in some African cultures sensory modalities other than the visual were typically relied upon. Wober indeed found, as predicted, that his subjects did not perform on visually related tests as uniformly as United States samples. He found that in his sample the proprioceptive modality was the dominant one, thus postulating that cultures may vary according to their "sensotypes," or their dominant mode of receiving and encoding stimuli, which in turn dictate the development of specialized abilities. Wober's findings also add further evidence to the position that no matter how culture-free a test may appear on the surface, "culture" can transmit itself on many levels.

The issue we have raised in the latter portion of this paper is that of generalizability of our construct of intelligence. Historical retrospect suggests that the imposed etic nature of the cross-cultural application of intelligence testing has made it difficult to arrive at any other conclusion than deficit intellectual functioning on the part of people from other cultures. We feel that the problem may lie in an incomplete conception of the variations in intellectual processes. Professor Gough, who is fully aware of these tangential and supplemental tactics and ideas we have summarized, would no doubt agree.

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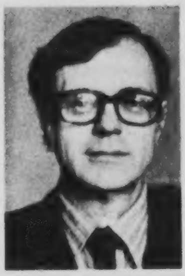

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Personality, Race, and Social Class Determinants of Occupational Goals[1]

A concern of special interest to educators is the mobility of young people. This may be expressed in terms of "doing well," "achieving good grades," "achieving success," or "avoiding failure and its unpleasant consequences." I have been interested for the past few years in attempting to understand some of the forces that may have something to do with the lives of young adults who, in spite of certain status ascriptiong with which they are labelled and by which their lives are in part determined, wish to improve their situation in comparison with the situation of their parents. The particular people with whom I have been working are black and white American college men and women from upper middle, middle, and working class backgrounds who are attending state grammar schools. My point of view with respect to the desires of these people for mobility has its origins in the work of David McClelland on economic development and of John W. Atkinson on risk-taking. Each of these psychologists has been interested in the effects of certain psychological states – which they call "motives" – on their respective phenomema. In the early 1950s McClelland and his collegues published a very influential book by the title of *The Achievement Motive* (McClelland, Atkinson, Clark, and Lowell, 1953). In this work they proposed that a combination of the techniques of experimental and clinical psychology could be developed

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and used to explore systematically the effects of unconscious motivational processes on human behavior.

McClelland and his colleagues conceptualized a motive as an unconscious disposition that activated, directed, and determined the intensity of an individual's behavior. They chose to confine their initial investigations to the development of a means of measuring the achievement motive and to the achievement as an important characteristic of American society. They adopted a semi-Freudian point of view with regard to the nature of motives in humans and maintained that they were acquired early in life at essentially a pre-verbal stage of development and were, consequently, "unconscious" in the sense that a person could not accurately describe whether or not he possessed strong or weak motives of particular kinds. Indeed, in the case of the achievement motive it is likely that virtually every American one might ask would indicate that he enjoyed successful achievement because of the high value placed on competitive achievement by American society.

They decided, because of these complications, that a modified clinical technique would be the appropriate means for obtaining from subjects information that could be analyzed for the presence or absence of achievement motivation as revealed by what they termed "achievement imagery." The technique borrowed from clinical psychology was Murray's (1943) *Thematic Apperception Test,* or *TAT.* As I am sure you are aware, the *TAT* is a technique whereby a subject is presented with a series of ambiguous pictures and asked to tell stories about them.

McClelland and his associates developed in a series of studies, the descriptions of which are beyond the scope of this paper, a system for coding the presence or absence of achievement imagery in the projective protocols obtained by means of the *TAT*. The following example illustrates the sort of thing they observed. A subject is shown a picture of a teenage boy seated at a desk with an open book before him. He is seemingly gazing off into space. One subject might describe the scene this way: "The boy has been studying for a long time because he wants to do well on a series of examinations that are coming up that will determine whether or not he gets into medical school. He wants to become a famous surgeon and make lots of money." Compare that with the following story. "The boy's mother has made his study but he would rather be out playing with his friends. He is thinking of how he can get done fast and is daydreaming about how much fun he had last summer." Without making any judgments about the desirability or undesirability of the goals expressed by each of our imaginary subjects, we can note that the emphases in them are quite different. The first is replete with "achievement imagery," i.e., fantasy about achievement, whereas the second reveals none at all. In practice, persons who produce stories of these different varieties are considered to have different motivational characteristics and their behavior is, typically, compared under controlled conditions to examine the presumed effects motivation has on it.

Two trends of research were instituted. Atkinson developed a program of experimental research that culminated in 1957 with the publication of his well known paper on motivation and risk-taking (Atkinson, 1957). The central point of that paper was that persons with strong achievement motivation will choose, when faced with alternatives differing in their probability of successful attainment, the alternative that is associated with a 50 per cent probability of success. Persons with weak motivation to achieve success would, under the same circumstance, tend to avoid the 50 per cent probability of success alternatives and manifest this avoidance either by making a choice of a more difficult alternative or of an easier alternative.

McClelland, on the other hand, became more interested in the relationship between achievement motivation and certain major social phenomena. This interest manifested itself in 1958 with the publication of a study of the rise and decline of maritime commerce in ancient Greece (McClelland, 1958) The technique of this study was to compare inferences made about the strengths of achievement motivation generally in Greek society by analysis of certain kinds of literary products for achievement themes during three different historic epochs with the archaeological distribution of large earthenware jars, which were used in the transportation of olive oil and wine, during subsequent periods. It was found that a rise in achievement motivation preceded a rise in economic activity and a decline in achievement motivation preceded a decline in economic activity. McClelland concluded that achievement motivation had been a causal agent with respect to these socio-economic events. Later McClelland published *The Achieving Society* (McClelland, 1961) and *Motivating Economic Achievement* (McClelland and Winter, 1969). In the former work he presented elaborate evidence that achievement motivation was related causally to industrialization and in the latter work he described an attempt to induce economic activity literally by teaching people to be achievement motivated.

The work that I am going to review in this paper had its beginnings in Atkinson's ideas about achievement motivation and risk-taking and McClelland's ideas about achievement motivation and society. My concern began with an interest in the possibility that achievement motivation might be related to occupational aspirations, that is, to aspirations for social mobility. The most general statement of the hypothesis is that strong achievement motivation would be related to a desire for occupational mobility. I was interested, however, in particular kinds of subjects and with a particular kind of mobility. I was not interested simply in occupational mobility in the sense that a child achieves an occupation with greater prestige than his father's occupation, or his father surrogate's occupation, but with occupational mobility in the sense of a desire to attain an occupation that, by virtue of social tradition, has been closed to persons because of status ascription. Among black Americans, for example, there were and still are, unfortunately, a large number of middle and upper middle class occupations that traditionally have been reserved for other races. Examples of these are engineer, airline pilot, psychologist, almost any of the sciences, the theater, politics, and more mundanely perhaps such occupations as insurance salesman. There are occupations that have been traditionally open as well. Examples of these are physician, lawyer, social worker, teacher, undertaker, and certain kinds of other small businesses such as, for example, barber shop owner. These are the occupations that collectively have comprised the basis for a black middle class. It is principally because Howard University has had law and medical schools that those professions have blacks in some degree of representation in them. If left up to traditionally white professional schools, of course, the picture would be quite different.

The initial study (Littig, 1966; 1968a; 1968c) of aspirations was conceptualized this way. To some extent aspiration to traditionally open and traditionally closed occupations can be thought of as representing different attitudes toward risk-taking. Other things being equal, a black person who aspires to an occupation in an area of employment that has only recently open to blacks would seem to be indicating a willingness to take somewhat greater risks than a black person who aspires to an occupation that has traditionally been open to blacks. The risk involved in aspiring to a closed occupation, however, is probably not an extreme one but rather one based upon knowledge of what is required in the way of preparation, the intensity of recruitment of blacks into the occupational category, and at least some information about the extent to which other blacks have recently experienced success or failure, acceptance or rejection, in that occupation. In addition to Atkinson's (1957) theorizing regarding motivation and risk-taking, McClelland has argued that there is an extrepreneurial personality that is competitively disposed toward taking calculated risks and that this risk-taking propensity is related to the strong achievement motive component of the entrepreneurial personality. This being the case, it seemed reasonable to hypothesize that a strong achievement motive would characterize the personality of a black person who aspires to a traditionally closed occupation and a weak achievement motive the personality of a black person aspiring to a traditionally open occupation.

Rosen (1956) reported a relationship between achievement motivation and social class membership. It appears with greater frequency among middle class as compared with working class persons. Rosen's subjects were white high school students for whom a middle class norm of competitiveness and a strong achievement motive would be in agreement. To the extent to which a relationship exists between strong achievement motivation and closed occupational aspirations among members of the black middle class a conflict may exist since Frazier (1955) has argued that middle class black norms favor those occupations that we have categorized as traditionally open. One means whereby this conflict might be handled would be for a closed occupation aspiring black to reject middle class identification for himself if he has a strong achievement motive. Consequently, we introduced a second variable into the research – self-perception of social class membership, that is, the subject's identification of his family's social class status, not its actual status. It was assumed that a middle class identification would indicate that a subject had acquired black middle class norms regarding the desirability of high prestige open occupations such as lawyer or physician whereas a working class identifying subject would not have acquired these norms. It was hypothesized, therefore, that middle class identification would be associated with aspiration to open occupations and working class identification would be associated with aspiration to closed occupations among blacks.

A corollary of the hypothesized relationships between achievement motivation and occupational aspirations and social class identification and occupational aspirations is that the group most likely to aspire to closed occupations is the working class group with strong achievement motivation.

The subjects were 70 male undergraduates enrolled in introductory psychology at Howard University. Their achievement motivation was assessed by means of content analysis (Smith and Feld, 1958) of the *Test of Insight* (French, 1958). The *Test of Insight* is a self-reporting, group administered projective device that asks a subject to respond in writing to 10 items such as, "Bill always lets the other fellow win," by reporting what the person is like, what he wants to do or have, and what the results of his behavior are apt to be. The *Test of Insight* was selected to generate data for the assessment of motivation because it does not rely upon pictorial cues as does the *TAT*, the more customary device for eliciting projective material for motive analysis. The advantage of the *Test of Insight* is that it avoids the problem of distortions in imagery that may result when black subjects respond to pictures showing whites as the central characters. A thorough discussion of this issue has been carried out by Veroff, Atkinson, Feld, and Gurin (1960). The reports generated by the *Test of Insight* are systematically analyzed for achievement imagery and related traits as these are manifested in the subjects' projections.

Subjects' occupational aspirations were obtained from their responses to two items on an instrument we call the *Questionnaire on Vocational Goals of Students* (Littig, 1966). These items were: (1) Five years after completing your education what job do you plan to have? (2) What job would you like to have five years after completing your education if it were possible for you to have any job in the world. The first question specified the subjects' real aspirations and the second question their ideal aspirations. At this point we were concerned only with analyzing the subjects' real aspirations. When this was done we found evidence in support of the hypothesized main effects but, although the direction was correct, the predicted interaction was not significant. Strong achievement motivation proved to be associated with aspiration to traditionally closed occupations and working class self-identification was associated with traditionally closed aspirations. There was, however, no acceptable evidence that it was primarily the strong achievement motivation, working class self-identifying subjects who especially aspired to closed occupations. Rather, it seemed at this point that we had at least two interesting and relatively independent variables to look at in this area of study. One of these, motivation, is tied to personality and the other, social class identification, is linked with social structure.

Thus reinforced, we proceeded to investigate further the relationships between motivation and social class, on the one hand, and aspirations to open and closed occupations by black American men on the other hand (Littig, 1968d; 1971a).

The next study extended the research by several means. Larger samples were employed and were drawn from quite different sources, and social class was conceptualized differently. It was decided not to use any of the usual means (e.g., income, education, occupation, place of residence) of establishing the social class variable for the student samples that provided the data, but rather to establish the general social class status of the college in which the student was enrolled and then to consider the social class milieu of the college to represent the most important source of social class-related group norms in the experience of the students. Briefly, this was accomplished by establishing the distributions of blue and white collar occupations of the subjects' fathers and then defining social class milieu of a college as that which corresponds to the predominant occupational categories of the fathers. Thus, a working class college was considered to be one in which the majority of students came from families in which the father was employed in a blue collar capacity. A student attending a working class college was considered to be primarily influenced by the working class milieu of the college regardless of the particular social class to which his own father was assigned. A comparable definition was made for middle class college. This conceptualization of the social class variable was, of course, based upon reference group theory and research (Lambert, Libman, and Poser, 1960; Newcomb, 1958; Sherif and Sherif, 1964).

The middle class black sample was obtained from Howard University, that, among other things, is quite cosmopolitan, recruits students from the black middle class, is a fully established university with medical, dental, law, business, engineering and architecture schools as well as many undergraduate schools and a graduate school that awards master's and doctor's degrees in many fields. In addition, the facilities of the four other universities in the Washington area are available through a consortium arrangement. The working class black sample was obtained from a state institution about 100 miles from Washington. It had been established after the civil war as a segregated black teacher training college and recently has acquired the status of a liberal arts college. It retains, however, many of its older faculty. It has had little in the way of a building or modernization program and caters largely to local working class blacks who wish to get a leg up on the mobility ladder. To visit this school is to experience the rather dismal and neglected nature of this type of institution, which exists unfortunately in still too many instances. The middle class and the working class black samples, then, were selected from these institutions because they seemed to exemplify those two social strata in the black community.

In this second study a white comparison group was added. It was possible that the relationships between motivation and aspiration that were observed in the initial study were artifactual in that by coincidence the occupations classified as closed-to-blacks were just those occupations that had particular appeal for people with strong achievement motivation because of the intrinsic qualities of the occupations, not because of their degree of availability to blacks. The white comparison group was selected from a state university in the same general geographic region as the black institutions. It was intended to reveal if the variable was indeed the open-to-blacks or closed-to-blacks qualities of the occupations or whether it was the particular occupations that had been so categorized. If the former were the case, then the motivational variables would not be expected to be related systematically to the selection by whites of occupations so designated for blacks. If the latter were the case, then white subjects should display a pattern of motive-related occupational choices that is similar to that of the black subjects.

Before considering the results of this study, it is necessary to describe one more aspect of it. The technology of research on the achievement motive, you will recall, requires the content analysis of projective materials for achievement-related imagery. Subsequent to the development of the achievement motive scoring system, Heynes, Veroff, and Atkinson (1958) introduced a method of scoring the same kind of material for affiliation motivation and Veroff (1958) developed a method for scoring power motivation. The affiliation motive is concerned with the need to be liked and not to be rejected by others whereas the power motive stresses the quality of gaining satisfaction from exercising control over the means of influencing others.

Not being capable of letting well enough alone, we decided to add these two motives to the research. The decision wasn't Totally based upon the exploitation of available technology but that had something to do with it. We were able, however, to develop what we thought was an interesting and highly likely hypothesis regarding affiliation motivation. We hypothesized that among black subjects strong affiliation motivation would be related to aspiration to traditionally open occupations and to the avoidance of closed occupations in comparison with black subjects with weak affiliation motivation. It was reasoned that traditionally open occupations, by virtue of the fact that they have been open to blacks in the past, are occupations in which it is possible to maintain professional and business relationships with other blacks, to remain in the black community, and, therefore, to maintain strong affiliative ties. Traditionally closed occupations, in contrast, necessarily are ones in which a black, as a social innovator, may not anticipate warm personal relationships and, in fact, even chance rejection. Hence, it was argued that blacks with strong needs for positive affiliative responses from others and who feared rejection by others would choose to enhance the possibility of receiving the former and avoiding the latter by seeking occupations in which they would maintain a high level of interaction with the black community. Because of the previous finding of a relationship between social class and aspiration, we again predicted an interaction. We expected that middle class blacks with strong affiliation motivation would be most likely to manifest a tendency to aspire to traditionally open occupations.

We were not sure of how to guess with respect to power motivation but thought it would be interesting to include this disposition as an exploratory variable largely because of the great emphasis that was being placed on black power at the time this research was being undertaken. The notion of power was clearly striking a responsive chord at the time. There seemed to be two possibilities in terms of this research: (1) perhaps a need to control others might lead a black student to aspire to high status open occupations that could increase his possibilities of claiming a position of authority in the black community, or (2) a black student with a strong power motive might aspire to traditionallh closed occupations because these represent more direct avenues to a broader and more meaningful kind of social power. We hoped to find out.

Let us consider the results for the white subjects first. These subjects produced no significant relationships for any of the motivational variables when analyzed in terms of occupations traditionally open and closed to blacks. White subjects did, however, indicate a preference for occupations traditionally closed to blacks and that finding is consistent with the construct – the closed-to-blacks occupations are the ones preferred by the white majority.

The data obtained from the black subjects were complex indeed. First of all, the relationship between social class and aspiration to open and closed occupations was replicated. The black subjects from the middle class college aspired with greater frequency to open occupations than to closed and the black students from the working class college aspired with greater frequency to closed than to open occupations when they were asked to report their real occupational goals. Interestingly, when one compares the two black social class groups and white subjects with respect to their ideal occupational goals there are no differences – all aspire more frequently to closed goals. It would appear, therefore, that the middle class black subjects are indeed conservative in occupational aspiration when they are asked to think in terms of reality but when asked about their fantasies they also manifest a preferences for closed goals.

Unlike the initial study, no relationship was found directly between adhievement motivation and occupational aspirations. There was some evidence, however, which supported the hypothesized interaction between social class and achievement motivation. The strong achievement motivation working class black subjects' real aspirations were not significantly different from the white control group in their open and closed patterns whereas the middle class weak achievement motivation black subjects were different – they were the least frequent aspirers to closed real occupations. Our information about achievement motivation and black occupational aspirations has been extended, then, in suggesting that the principal area of influence of the motive is in the context of the working class.

Affiliation motivation may be considered next. Our expectation was that strong affiliation motivation would be related to traditionally open occupational aspirations. To our consternation, not only was this not the case but the data suggested the reverse. Strong affiliation motivation was related to aspiration to real closed occupations. Subjects with presumed strong needs to be liked and not to be rejected were aspiring to just those occupations in which you might expect the affiliation motive to be frustrated. Again, no differences occurred when ideal aspirations were considered.

When we looked at the interaction between affiliation motivation and social class it was apparent that it was the middle class black subjects who were principally accounting for the motivation affect. In that social class category strong affiliation motivation was associated with open real aspirations. When iedal aspirations were considered all groups aspired predominantly to closed occupations.

The third motivational variable was power motivation. It was not related to ideal aspirations but was strongly related to closed real aspirations and that relationship was especially prominent among working class black subjects. In that group a very pronounced association was present between strong power motivation and traditionally closed occupational aspiration.

Thus, in the second study the following findings were made: (1) Meaningful associations occurred when subjects were asked about their real but not about their ideal occupational aspirations. Under the latter condition the majority of subjects, whether black or white, middle or working class, or with strong or weak motives, aspired to occupations traditionally closed to blacks. (2) Social class, again, was related to real aspirations. Working class status was associated with closed aspirations and middle class status with open aspirations. (3) Strong achievement motivation was related to closed aspirations among working class but not middle class subjects. (4) Strong affiliation motivation was related to closed aspirations among middle class but not among working class subjects. (5) Strong power motivation was related to open aspirations among working class but not middle class subjects.

A few interpretative comments are appropriate at this point. What these data seem to indicate is that the classic achievement motivation formulation that stresses the ambitious qualities of the human personality is especially applicable in a truly underdog circumstance. It is just those strongly achievement motivated working class black students who are the ones who are innovatively ambitious. It is they who want to break out of traditional patterns, want to break, as it were, with the past and enter into novel and perhaps somewhat risky occupational ventures. But it is just this propensity for risk-taking that is theorized to be so characteristic of strong achievement motivation people. It would appear, therefore, that when black students are asked to set levels of occupational aspiration, it is the situation in which there is obviously a healthy distance to go – working class to middle class innovative – that is the one in which achievement motivation manifests its influence. In the black middle class situation, where there is no where to to in a vertical mobility sense, no achievement motivation effect is observed.

It was, however, in the middle class group that a relationship between affiliation motivation and real occupational aspirations was observed. The middle class high affiliation motivation subjects preferred traditionally closed aspirations in greater proportion than did the low affiliation motivation middle class subjects. This was contrary to expectations and we must ask, "Why?" Recall that the concept of affiliation motivation is presumed to represent a disposition to find gratification from positive affective responses from others and to be fearful of rejection by others. We initially assumed that the significant others were members of the black middle class but the data suggest that perhaps it is from the white majority that strong affiliation motivation middle class blacks seek positive affective rewards. It is in traditionally closed occupations that they would enhance their opportunity of receiving these.

The effects of power motivation are interpretable in many ways and I will not dwell on them here. I will point out that the research just reviewed was conducted at the high point of the black power movement and a major feature of black power rhetoric was the attainment of control over the black community. In my view the finding of a relationship between strong power motivation and aspiration to closed occupations is contrary to the content of that rhetoric because closed occupations tend to remove a black person from the black community. If we assume that black power advocates had strong power motivation, then these data suggest that the referent for black power was the wider community rather than the black community.

It seemed at this point in the development of this research program that some attention should be paid to women. We wondered about the consequences of women's liberation on their occupational goals. The next study (Littig, 1971b), therefore, was designed to explore effects of the same configuration of social class and motivational variables on the occupational aspirations of women. Initially, we thought in terms of black women subjects with appropriate white comparisons groups. A preliminary investigation of the occupational structure revealed, however, that it was hardly possible to speak of occupations traditionally closed and open to black women vis-a-vis white women. Sex was, in fact, the principal exclusionary factor. The sexual division of labor in the United States has resulted in broad areas of the occupational spectrum that have been traditionally closed to women, either black or white. Consequently, the study of women has an inherent analytical problem in that the appropriate comparison groups – black and white women – function in a labor market that is in many of its components exclusionary of both groups.

The methodology of this study was exactly the same as that of the preceding one. Black subjects were obtained from colleges differing in their social class characteristics and white subjects from a white college similar in social class make-up to the middle class black college. The same instruments were employed except that a female form of the *Test of Insight* was substituted for the male form used previously. Because of its importance, I will describe in some detail the means whereby occupations were classified as open or closed to women. Bright (1971) determined, on the basis of the 1960 United States census, occupations in which women achieved greater or less than 50 per cent representation. The former, for example, librarian, elementary and high school teacher, social worker, and nurse, were classified as traditionally open occupations; the latter for example, sociologist, journalist, lawyer, and engineer, were classified as traditionally closed occupations (or "innovative" in Bright's terminology). Bright classified 33 occupations among which only six proved to be closed to black women and open for white women and, of course, none was open for black women and closed for white women. When Bright's classification system was applied to the aspirations expressed by our women subjects extremely few instances occurred in which black women aspired to occupations traditionally closed to them which were not also closed to women generally. Consequently, traditionally closed and traditionally open occupations were so classified on the basis of the proportion of women in the occupation regardless of race. The occupational structure could not be differentiated with respect to its relative accessibility for black and white women as it could for black and white men. What was examined, then, was the reaction of black and white women to a shared occupational structure in which the concepts of traditionally open and traditionally closed have similar meanings irrespective of race.

The findings for women were, of course, markedly different than what we had obtained from men. First of all, no motivational effects were obtained. Neither achievement nor affiliation nor power motivation differentiated the real or ideal aspirations of either black or white women to occupations traditionally open and closed to women. Social class did not differentiate women's aspirations. There was, however, one very characteristically different aspirational phenomenon between black and white women. In addition to the aspirational categories of occupations open and closed to women a further category was employed under that very useful heading – "other." This category served as a catchment for such replies as "don't know," "not sure," and "housewife." Essentially it distinguishes a group of college women who have no occupational aspirations or who are so uncertain about their aspirations that they are unable to state them. The heavy users of that category of responses were the white subjects. Thirty-one per cent of the white women subjects did not state a classifiable occupational goal. By way of contrast, only 7.5 per cent of the black women subjects were unable to state a goal when asked for their real occupational aspirations. When the subjects were asked to report their ideal aspirations the percentage remained the same for black women but dropped to 22 per cent for white women. It is clear that for black women college students an occupation is a much more important goal than it is for white women college students. The former give essentially the same responses whether asked to report their real or their ideal goals while the latter tend not to be specific when asked about real goals but when asked about ideal goals they are able to express more freely in fantasy what they might like to do.

Our data at this point seemed to indicate that men and women were quite different from each other with respect to certain factors related to occupational aspirations. Certain motivational and social class variables are related to the occupational aspirations of black men when compared with white men but none of these variables is related to the aspirations of either black or white women.

With this history or more or less ambiguous findings, a characteristic of repeated research in social psychology, we decided to attempt another replication in a different country (Littig, 1973). I was particularly interested in enhancing the potency of the social class variable and therefore chose England. A further reason for the choice of England was that I had done previous research in that country on the relationships between anxiety and occupational aspiration (Littig, 1963) and occupational attainment (Littig, 1970) and the results of those studies were encouraging with respect to the proposed undertaking. Our intention was to explore the interrelations among race and motivation in the context of a different, less permiable, social class structure. The intention was to obtain in England samples that were comparable to the American samples with respect to race, sex, social class membership, and educational attainment. Much to our distress, after arriving in England and discussing the goals of the study with English educational authorities, it became apparent that there were so few representatives of racial minorities in English higher education that it was necessary to abandon race as a variable. In spite of the fact that England now has a sizable population of racial minorities, their members are not yet entering into advanced education. We were forced, therefore, to concentrate on sex and social class and our thoughts about the latter led us to the conclusion that there were certain parallels between the English class system and the American racial system which made it reasonable to expect that we could make class comparisons in England in a manner similar to the race comparisons that had been made in America. We turned, therefore, to the consideration of the proposition that in England being born into the working class is very much like being born either black or female in America *in so far as the occupational structure is concerned.* Indeed, the kind of occupational mobility available to an English working class person bears a clear resemblance to the kind of mobility opportunities available to black Americans and perhaps to women in America.

Turner (1960) has distinguished between "contest" and "sponsored" mobility. He has contended that the former characterizes the (white) American system and the latter the English system. According to Turner contest mobility is a system in which upward occupational mobility is accomplished as a result of an aspirant's own efforts. He is successful by winning a scarce prize that, of course others fail to achieve because their efforts are insufficient. Sponsored mobility is a system whereby upward mobility is given to certain persons seen as worthy and deserving by an elite that has control of access to desired occupational goals. Upward mobility is given to the extent that the candidate has qualities that the elite wishes to see in its fellow members. Turner (1960) writes, "Contest mobility is like a sporting event in which many compete for a few recognized prizes. The contest is judged to be fair only if all the players compete on an equal footing." And, "sponsored mobility, on the other hand, rejects the pattern of the contest and substitutes a controlled selection process. In this process the elite or their agents, who are best qualified to judge merit, call those individuals to elite status who have the appropriate qualities."

Without stretching the parallel too far, we thought perhaps that the mobility situation for a black American student is similar to that of a typical English student. That is, that the black American student does not enter into a general contest arena with white American students but operates under a system of mobility allocation that requires him to wait to be sought out by those who feel he has the appropriate credentials for mobility regardless of his possession or lack of possession of the credentials, such as money or test scores, that ordinarily facilitate the mobility of white students in a contest system. Hence, we find phenomena such as job quotas for blacks (and women), the abolition of competitive examinations such as the GRE and almost by default the reliance upon the judgment of elites, especially teachers, to determine which members of minority groups will be sponsored for mobility by allowing them access to the appropriate academic and other resources.

Brotz (1959), in writing about the Jews in England, has described the situation in these words, "In England, at any rate, provided one has brains, one can be *selected* (his italics), by virtue of the scholarship system at both public schools and the ancient universities, for admission to those institutions. And with the fixed place that they occupy in English society, anyone who has attended them is at once granted the standing of a gentleman as well as endowed with a skein of connections – for jobs, clubs, political life, etc. – that serve to solidify his social position for the rest of his life."

Brotz has not described a situation in which a strong drive to achieve success would necessarily be useful. Rather, as well as possessing the necessary abilities for advancement, an ability to get along with others would seem to be highly useful. It appeared, therefore, not unreasonable to suggest that affiliation motivation may be the more appropriate disposition for facilitating upward occupational mobility aspirations in England and in other societies in which sponsored mobility is the dominant form of social mobility as, presumably, was the situation for strong affiliation motivation middle class black subjects in America who aspired to traditionally closed occupations.

With these considerations in mind we undertook an investigation of the effects of social class membership, motivation, and sex on aspirations to traditionally open and closed occupations among English grammar school students. The methodology was essentially the same as that used before. The *Test of Insight* was used to assess motivation. Social class membership was defined in terms of father's occupation. This identified three broad social class groups. These were upper middle class consisting of occupations primarily requiring university education and included professions such as medicine, engineer, and solicitor, and upper level management such as corporate executives and higher grade civil servants; middle class, which incorporated occupations requiring some advanced training but not usually at a university and includes, for example, primary and secondary school teachers, laboratory assistants, salesmen, commercial travelers and other white collar and business occupations which do not meet the criteria for inclusion into the upper middle class; and working class, which included all manual occupations, whether skilled or unskilled. Traditionally closed occupational aspirations for men in England were defined as upper middle class occupations when these are aspired to by working class members. Thus, working class Englishmen were viewed as being in important respects like black American men. For Englishwomen, on the other hand, traditionally open and closed occupations were defined, as in the American study, in terms of the proportion of women in the occupation.

Thus, the study took the form of considering (1) the aspiration of English working class men to upper middle class (traditionally closed) and other (traditionally open) occupations, and (2) the aspiration of Englishwomen to occupations in which there were less than 50 per cent representation (traditionally closed) and more than 50 per cent representation (traditionally open).

Based upon the earlier results in America, we looked for the following principle relationship: Strong affiliation mobility will be related to aspiration to traditionally closed occupations, i.e., to upward mobility aspirations. If this proved to be the case, then our argument with respect to the differences between the effects of contest and sponsored mobility would take on some substance. To cover all possibilities, we also hypothesized that strong achievement motivation and strong power motivation might also be related to closed aspirations.

Subjects were obtained from English grammar schools in London and from the surrounding suburbs. The inner London schools were the major source of working class subjects and the suburban schools provided the middle and upper middle class subjects. Grammar schools in England are state schools that provide essentially an academic as opposed to a vocational education. Our subjects were, therefore, already selected out from the educational tract that would lead to working class occupations. They were all in a tract that could lead to a university position but none was guaranteed it. All subjects were in the sixth form which means that they were basically of the same age and educational attainment as first year students in American colleges.

We may dispose of the results for women very quickly. They were entirely random. English women from various social class backgrounds, as American women, both black and white, do not respond to open and closed occupations in any manner that can be understood systematically in terms of the variables of this study. Regretably, the psychology of women was not advanced by this study[2].

Englishmen, on the other hand, came through, although not exactly as predicted. Affiliation motivation proved to be related significantly to aspiration to real occupations classified as closed, but not among working class subjects but among middle and upper middle class subjects. Neither achievement nor power motivation were related to real aspirations or were any relationships observed for ideal aspirations that are relevant to the development of this paper.

Well, of course, that wasn't exactly as we had expected but on reflection it's not bad. You will recall that among black American men strong affiliation motivation was related to aspiration to traditionally closed occupations when the subjects were from middle class backgrounds rather than working class backgrounds. Now we find that, among Englishmen, strong affiliation motivation is related to aspiration to occupations classified as traditionally closed to working class men but only among persons who already are in the middle or upper middle class in terms of their family background.

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[2] Walkerdine (1972) has recoded the *Test of Insight* data obtained from women for fear of success motivation (Horner, 1968). She reports no significant relationship between women's fear of success motivation and aspiration to traditionally open and closed occupations.

If we examine again the criteria for establishing closed occupations we may note that these are professional and high managerial occupations we may note that these are professional and high managerial occupations which require advanced education and long training. They represent, therefore, even for middle and upper middle class students, an achievement of some magnitude in comparison with all other occupations which fall into the traditionally open category.

I shall briefly review the results of all of these studies at this point and then try to see if they indicate some general patterns. The data indicate the following: (1) Among women, including black and white Americans and Englishwomen from three social class levels, there are no significant relationships between any of the motivation variables and aspiration to traditionally open and closed occupations. (2) Two studies reveal a relationship between achievement motivation and aspiration to traditionally closed occupations among black American men. In one of these in which subjects were differentiated in terms of social class the relationship existed only for persons in a working class situation. (3) Two studies showed a relationship between aspiration to closed occupations and affiliation motivation among subjects of middle class background. One of these studies employed black American men as subjects and the other white subjects from English grammar schools. These are, in many respects, quite obviously rather distinctly different groups of subjects.

If our hypothesis about the relationship between affiliation motivation and occupational aspirations within the context of a system of sponsored mobility is correct, then in the English sample it is those men with strong affiliative needs, talent, and middle class origins who expect to be selected for placement in the higher and more rewarding professions and business occupations. In like manner in America where, we have argued, a similar system of sponsored mobility operates for blacks we find a similar relationship between affiliation motivation and aspiration to closed occupations among a middle class group.

These data lead to certain conclusions about the nature of the relationship between personality and occupational aspirations which go beyond the almost common sense notion that achievement motivation should be related to aspirations to the more difficult occupational options. The first of these is that men and women are different vis-a-vis occupations. The second, less obvious, conclusion is that different motives operate to achieve similar ends within different social class levels. Within the working class achievement motivation was principally related to aspirations; within the middle class it is affiliation motivation which is effective in influencing these aspirations.

Several years ago Crockett (1962) published an analysis of occupational mobility in which he attempted to relate strong achievement motivation tc upward occupational mobility and weak achievement motivation to downward mobility. He obtained no evidence of the latter phenomenon but did find support for the former. He found this, however, only among subjects whose fathers had, in Crockett's terms, "low prestige" and "lower middle prestige" occupations, that is, among persons whose origins were in the working class or the lower middle class. Among his middle class subjects upward mobility was related to strong affiliation motivation.

Crockett's analysis was made on males from a national sample collected in the late 1950s. Our results are derived from quite different sources – black American and white English. In spite of these differences both sets of findings are generally in agreement. In both instances affiliation mobitation is related to comparable types of occupational aspirations among members of the middle classes.

The implications of these findings are important. First, with respect to working class subjects, the data indicate that among black American men the desire to better oneself, to get ahead, to succeed, or, more technically, to have a strong achievement motive, is important and is operating quite consistently with both our common sense notions and our theoretical notions (Atkinson and Feather, 1966) about how the need to achieve would manifest itself in the occupational realm. Secondly, with respect to middle class subjects, the data from these very disparate sources confirm and extend Crockett's findings of the importance of affiliation motivation in middle class occupational mobility. The sources of the present data, however, suggest the interpretation that it is the type of mobility system in which the person is functioning rather than, as Crockett argued, the modern bureaucratic type of organizational structure into which he may move that is the effective situational variable. Affiliation motivation appears to be relevant to situations in which sponsored mobility dominates whereas achievement motivation is more apt to be effective in the context of contest mobility.

I would like to conclude with a speculative remark about the future. There is evidence, based upon the coding of achievement motivation and affiliation motivation in American reading textbooks for each twenty-year period from 1800 to 1950 (DeCharms and Moeller, 1962), that the former is declining whereas the latter may be increasing. This change is consistent with a move from contest to sponsored mobility in America. The introduction, formally, of quotas into occupational, educational, and even political realms of life in America does suggest that we may be establishing a mobility based upon sponsorship. If the future is indeed to take this form it is important for social scientists to address themselves to its implications. Will mobility be greater or less in the future? What is the future for persons with strong achievement motivation who come from working class backgrounds in a system that no longer encourages this type of personality? Crockett's data supply a hint of an answer to this question. His working class subjects with strong achievement motivation did not migrate occupationally out of the working class – they moved only to occupations at a higher level within it.

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Motivation: Antecedent to Learning

Commentary on Professor Littig's Paper

Ralph Glebe and Robert D. Meade

Professor Littig's continuing efforts to shed light on factors that are responsible for motivations and aspirations of young people in America's black sub-culture are a welcome addition to this symposium. That he has broadened his research populations to include people of other nationalities as well as American women is also most welcome. The relationship between personal motivations and learning and training for specific occupations goes without saying. Therefore, the significance of his research to the specific problem of learning that is highly critical to the individual need not be established further. Aspirations viewed cross-culturally are directly related to what will be learned in specific cultures.

Historically education has been viewed as one of the great American social solvents. Implicit in America's continuing belief in the efficacy of the quality of educational opportunity to produce equality of social opportunity, has been the belief that those groups having access to the educational institutions will have both the ability and the willingness to take full advantage of these resources. Although it is possible to question the relative equality of the educational resources available to everyone, the apparent failure of recent efforts to achieve total equality of actual achievement may lead one to conclude that these differences may be due to either differences in ability or motivation or both. It may be that some sub-cultural groups do not take advantage of opportunities available to them because of motivational considerations instilled in them by their own sub-cultural norms.

While some researchers have concluded that lack of ability may be genetic (Jensen, 1969) the greater majority of social scientists continue to lay the blame on early environmental opportunity. For example, Katz (1964), emphasizing the early school environment, found that while a white tester raised incentive value of a task for a black child over that of a black tester he also lowered the probability that the student would do well on the task. Thus, the observed lack of ability may simply be a combination of a poor early educational environment and the continuing belief that black students cannot compete effectively with whites.

Thorndike's (1974) presentation at this symposium, while not dealing directly with American blacks, reflects another means of attacking the ability problem. His emphasis lies mainly on the factors in the non-school environment that lead to academic achievement. As one might expect there are many differences between the home environment of a white, middle-class child and that of a lower-class black child, and one could hazard a guess that at least some of the differences are the same as those between the home environment of a good academic achiever and a poor one. Thorndike's work, of course, leaves open the question of just what cultural and home factors affect the final school achievement.

In exploring the school and home factors contributing to academic achievement it becomes difficult, if not impossible, to factor out the variables of ability from the motivational factors that contribute to scholastic success. Is educational success an accomplishment reinforced by the black community in general? Although there are a number of studies (*e.g.* Glenn, 1963; Gist and Bennet, 1963) which seem to indicate that it is, these studies do not indicate from what strata of the black community these samples were drawn. Certainly, class is a much too important variable to ignore when discussing motivation for educational attainment.

Littig (1968, 1971) in his studies of goal setting by American blacks avoids both the problem of academic ability and willingness by examining a group of blacks that is presumably already judged to be capable, both intellectually and motivationally, of succeeding scholastically. Thus, Littig seemed to be asking the question: given that blacks are capable of taking advantage of the educational opportunities available to them, what motivational factors will lead them to seek out high status occupations that have been essentially closed to them in the past. Not too surprisingly, he found that the group which had the least reason to expect a favorable reception into traditionally open occupations, the lower class group was the one which was most likely to enter the traditionally closed occupations.

Much more surprising is Littig's finding that middle class blacks who score high on need for affiliation are much more likely to seek out occupations that have only been open to whites in the past. Crockett (1962) also found that the best predictor for upward mobility for middle class whites was a high score on need for affiliation. Littig has pointed out that for his sample of English subjects, affiliation motivation was indicative of aspirations to traditionally closed occupations only for his middle and upper class groups. One is tempted, as is Littig, to ascribe the middle class affiliation motivation interaction to the same source for both the black and white samples. But it becomes necessary to point out that for the white sample, affiliation motivation is predictive of occupational aspirations within an occupational group that is highly similar to that of their parents, while the black sample is seeking to enter an occupational category that is highly dissimilar from that of the parents. Thus, one would expect the results that Littig obtained for his English sample, but one would predict, as Littig did, the opposite for the black sample.

In an earlier paper, Littig (1971) hypothesizes that the need for affiliation motivation effect may have reflected a desire on the part of high affiliation middle class blacks to associate with middle class whites, and there is a substantial amount of evidence in support of this dating as far back as Clark and Clark (1947). More recently in a similar color preference study with children, Sciara (1972) found that fourth grade black boys tended to ascribe higher status occupations to lighter skinned blacks, although there is now some evidence that this trend is not stable (Ward and Brown, 1972). In an investigation of adult black attitudes toward bussing, Cagel and Becker (1968) found that the higher the socio-economic status of the blacks questioned the more they tended to favor integration. In a study more closely related to a desire to associate with whites, Wester and Howard (1951) found that the higher the status of the blacks investigated the more they identified with whites, especially if the reference whites were of a higher status.

Finally, there is the study conducted by Parker and Kleiner (1964) which resulted in the finding that as middle class blacks gain in social prestige, they tend to identify more with whites and less with blacks.

Unfortunately, the much-needed study to determine the interaction between affiliation motivation, class position, and social distance expressed toward whites has not yet been conducted. Thus one can but speculate that there may be a shift for those blacks who score high on affiliation motivation from desiring to associate with blacks to whites as they proceed up the social mobility ladder. At any rate, Littig's findings point out the need for further research in the area of affiliation motivation for sub-cultures generally.

While motivation for affiliation is, to some extent, a predictor of the occupational aspiration category of middle-class blacks, Littig found that we must look to the motivation for power as a predictor of occupational choice among lower class blacks. Crockett (1962) found that power motivation was also a good predictor of upward occupational mobility for lower class whites. Interestingly enough, Battle and Rotter (1963) report that both middle-class black and middle-class white children scored essentially the same on a test of internal locus of personal control, while lower-class blacks scored significantly more toward the external control than either of these two groups. There was, however, no significant trend in that direction for the lower-class whites.

Motivation for power deals with an individual's predisposition to be concerned with controlling others and "locus of control" concerns an individual's perception of where the control of events affecting him resides. Thus, it appears that we may be dealing with two concepts that are related to each other. Unfortunately, a precise determination of the relationship between them has not been made and thus to account for the difference of any observed effects of power motivation between middle-class blacks and working-class blacks, by citing the observed difference in locus of control, must be considered to remain highly speculative.

Lefcourt and Ludwig (1965a) found that adult inmates, presumably from the lower classes, project very little of control to internal sources but in another study (Lefcourt, 1965) it was found that black inmates, when given some task in which they had some personal confidence of skill such as gambling, demonstrated a much higher degree of internal control than did white inmates in the same task. This observation is similar to Katz's (1964) finding that black children, given some background of success at a task in which they otherwise deferred to white children, would begin to compete with considerable vigor.

Presumably, since all of the subjects in Littig's samples reported in this symposium were college students, they had gained some degree of academic success and confidence in their own intellectual ability. Coupling this assumption with our knowledge of the recent "black is beautiful" movement, and Lefcourt and Ludwig's (1965b) observation that black inmates, given a reference group will be more persistent in their task competition with white confederates than black inmates without a reference group, it is possible to hypothesize that lower-class blacks, high in power motivation, may view the entry into traditionally closed occupations as an opportunity to represent their group in exercising their confidence in their intellectual abilities and eventually exert some personal degree of control.

The foregoing discussion is, of course, highly speculative and much research will have to be done before any of these speculations can be tested. For example, an important study would be to determine the relationship between power motivation, the internal-external control dimension, and social class. Another worthwhile study would concern how blacks, high in power motivation, would compete with whites in comparison to those who score low. Further, it would be useful to know whether they show more desire to have power over whites than they might over blacks.

In this symposium, Littig's concern for factors affecting occupational goal setting has centered chiefly on achievement power and affiliation motivation. He is concerned with the interaction of complex, more or less persistent personality factors that are dynamically related to a highly important consideration in a young person's life. He is ultimately concerned with his subject's striving to overcome social barriers that have traditionally limited that subject's sub-cultural group or sex. A major aspect of this striving would, of course, include how much time and effort an individual is willing to invest in learning and training that are considered essential for a particular occupation. As such, Littig's work has considerable implication not only for the education of the individuals concerned but also for educators and counselors involved in assisting them in attaining those goals.

Since goal setting is concerned with an individual's planning for the future, it would be useful to go beyond the scope of Dr. Littig's present research to determine to what extent his various populations actively and realistically plan for their futures. In addition to power and affiliation motivation, realistic assessment of one's personal capacities and achievement motivation immediately come to mind and suggestion of these factors is by no means to be taken as being exhaustive. McClelland's (1958) work demonstrates the importance of factors affecting personal achievement motivation. Wallace (1956), Sundberg and Tyler (1970) and Meade (1971, 1972) have employed assessment of future time perspectives in different background, age and cultural settings with encouraging results. For example, Meade (1972) has demonstrated significant cultural variation in future time perspectives among several sub-cultures in India. At the same time, he has shown a consistent relationship between future time perspectives and achievement motivation, and both future time perspectives and achievement motivation appear to be related to actual achievement in education and occupations.

Concerning the comparison of motivation between the sexes, it would be useful to examine achievement motives across subjects of different ages as did Baruch (1967). A longitudinal study would be useful to determine when and how the various motives are established for each of the several populations would yield information that would aid significantly in understanding the development of motivation generally as well as cross-culturally.

Another useful approach might be to extend some of the studies of levels of aspiration by Lewin et at. (1944) to the problem of goal setting for the various populations. Indeed, with respect to the total process of life goals and preparing for them, it might be useful to determine whether some of the older motivational theories like those of Murray (1938) or Lewin (1935) might apply in analyzing the personal, social and cultural factors that are involved in occupational goal setting.

Finally, it should be stressed that the barriers that have acted to restrain American blacks from entering certain occupations are probably qualitatively different from those which have operated with respect to the English classes under study here and also for American females. This points up the importance that a careful analysis of these culturally derived motives and barriers to occupational mobility be made. One is likely to understand Littig to mean that his various comparisons are made along a continuum of barrier strength when, indeed, the differences may be discrete in nature.

With both legal as well as social pressures operating to attempt to improve educational and employment opportunities for American blacks, Littig's work should prove to be increasingly useful as well as enlightening. The increasing emphasis on equal opportunity for women, particularly in the United States, extends the interest and value of this work into still another facet of culture – the traditional development of sex roles. It is realistic to believe that continuous sampling will yield quite different results within a comparatively short period of time. At the cross-cultural level, on the other hand, such differences might not be as great or as transient for the English samples where class boundaries have appeared to be more rigid.

Professor Littig's work provides a hopeful background for numerous studies of personality, social and cultural variables on goal setting by sub-cultures. It is especially timely now that both women as well as sub-cultural groups are striving for significant improvement in the solvents that will provide them with learning, educational and employment opportunities comparable to others in the mainstream of contemporary life.

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Cultural and Language as Factors in Learning and Education*

It is difficult to dislodge deep-seated beliefs. The one I would like at least to loosen somewhat is the belief that culture and language have profound influences on cognitive processes. The trouble is that it makes awfully good common sense to say that people from different cultural or linguistic backgrounds think differently, and it even makes fairly good social-scientific sense. For instance, some time ago the anthropologist Levy-Bruhl (1910) presented a certain type of evidence to support the idea that the thinking of "primitive peoples" differed in substance and structure from that of more "civilized" man. Although this thesis has been thoroughly criticized over the years, especially by other anthropologists, it has been difficult to devise decisive empirical counter demonstrations so as to eradicate its influence within the behavioral sciences (c.f., Cole, Gay, Glick & Sharp, 1971). In the case of language, the ethnolinguists Sapir (1921) and Whorf (1941) presented an equally attractive argument for language's influence on thought, and although disputed by many, it has also proved resistant to empirical counter-proofs (c.f., Carrol & Casagrande, 1958).

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Over and above the difficulties we all have in defining culture, language, and thought, I have come to question the notion that culture or language affect basic cognitive structures and the related notion that culture affects the structure of personality. I was impressed early in my training with Kroeber's (1948) principle of the "psychic unity" of mankind, so much so that now I am persuaded that similarities among ethnolinguistic groups are much more prominent than differences, that cultural and linguistic backgrounds do not reach down to the basic structures of thought or personality, that variations of thought and personality within cultural or national groups (as reflected, for example, in socio-economic background differences) are much greater than between-group variations, and that few if any modal personality or modal cognitive profiles of any substance are likely to turn up in cross-cultural or cross-national research.

This statement of the matter is perhaps too enthusiastic and too strong in view of the important debates on the subject that are just getting underway. To be fair, it should be said that there actually are no good grounds yet available for deciding one way or the other. In the domain of language, for example, the Piaget school argues for the independence of language and thought while the Vygotsky school aruges for an interdependence. In the domain of culture's influence, there is a socially significant debate going on between those who argue that certain cultural or linguistic groups are "deficient" relative to others and those who hold that it is a question of "differences" rather than "deficiencies". And now both of these points of view are challenged by a third that questions whether there are any real deficiencies *or* differences (Cole, Gay, Glick & Sharp, 1971; Cole & Bruner, 1971). Hopefully these debates will stimulate research that in time will help us decide among the alternatives, but until then I believe it helps us to grapple better with the issues involved if we regard with a robust scepticism any claims about cultural or linguistic influences on the basic structures of thought or of personality. There is, of course, no debate about the influence of culture and language on the *content* of thought or the *expression* of personality, but these matters, captivating as they are in their own right, are much less socially significant than the one we are concerned with here.

My own early scepticism has been strengthened by personal research experience where cultural and linguistic contrasts were expected to emerge, but didn't. It started with a large-scale, cross-national study Otto Klineberg and I conducted some years ago on children's conceptions of foreign peoples (Lambert & Klineberg, 1967). Anthropologists helped up select ten world settings that would likely provide cultural contrasts in the ways children view themselves, their own national or ethnic group, and foreign groups. For example, through interviews we solicited the views of large numbers of children in such supposedly diverse settings as Japan, Brazil, Israel, South Africa, Turkey, France, Canada, and the U.S.A. Instead of cultural or national contrasts, what emerged from this study was a large and consistent set of age changes in children's conceptions of the world which were essentially the same from one setting to another. There were some differences that appeared to be cultural in nature, but it would have been very difficult in our investigation to disentangle the influences of social class, types and amounts of schooling, amounts of travel experience and the like from what seemed to be differences attributable solely to cultural setting. In this instance, then, we were expecting cultural differences; we gave them ample opportunity to show through; but few if any unambiguous ones did.

It happened again when I tried to investigage cultural differences between Canada's two main ethnic groups, the French-and English-Canadians (Lambert, 1970). Here the research involved between-group comparisons of attitudes, various aspects of social perception, indices of achievement motivation and competitiveness, and values associated with child training. Again, the major outcome was a pattern of similarities between the two ethnic groups, and the few contrasts that did turn up, as in the case of child training values (Lambert, Yackley, & Hein, 1971), cannot be attributed to cultural factors in any simple direct way. They could, in fact, be due as much to differences in social class, education, religion and the like as to ethnic background. At McGill we are still probing for reliable and unambiguous cultural differences among ethnic groups in Canada, and there is much work yet to do, particularly in making sure that we select comparison groups and testing procedures which will permit real cultural differences to show through. Nonetheless, when a serious attempt was made to find cultural differences where they might most be expected in the Canadian setting, few if any have as yet turned up.

One further research experience impressed me, this one conducted by my brother and Leigh Minturn (Inturn & Lambert, 1964) who were interested in the varieties of ways mothers bring up children and how upbringing affects personality. In collaboration with anthropologists they chose six cultural settings which, according to the anthropological literature, would likely provide the maximum in contrasts. Their investigation called for one to two year residences in each of the six cultural settings during which time detailed observations and interviews were carried out. The major outcome in this study was also unanticipated: they found very few instances of unambiguous cultural differences in styles of mothering. Instead the styles of mothering that did emerge seemed to depend on conditions such as the number of persons living within a particular space, the amount of time available after required work, to be with children, and so forth. What struck me was that mothers from such diverse settings as southern India, the Philippines, Mexico, and the U.S.A. could be so much alike in their associations with their children when account is taken of the environmental exigencies placed on them as parents, exigencies that could turn up in any form in any cultural setting.

These then are some personal experiences that have probably enhanced the bias in my thinking. Bias or not, it was nonetheless reassuring to read a recent article by Michael Cole and Jerome Bruner (1971) who support a very similar point of view. As they examined the claim that children of minority groups suffer from some sort of intellectual deficit, they were far from convinced. In fact, they argued that the information so far available "casts doubt on the conclusion that a deficit exists in minority group children, and even raises doubts as to whether any nonsuperficial *differences* exist among different cultural groups" (Cole & Bruner, 1971, p. 868, emphasis in original article). A similar idea has recently come from a less technical and less academic source, namely, Richard Hoggart, the Assistant Director-General of UNESCO (Hoggart, 1973) who from his own experiences has developed a faith in cross-cultural communication and understanding because of the "common qualities, the ribs of the universal human grammar" that link all men, and because of "common experience" and "common sorrows which above all link us."

There is then the beginnings of an argument to be made against cultural or linguistic differences and their putative impingement on the structures of personality and cognition, and in time the argument may become convincing enough to disturb deep-seated beliefs to the contrary. But until that time arrives, the argument for most people will remain academic. It is this dilemma that intrigues me, namely, that people's beliefs can become so pervasive and so deeply rooted that no attention is given to evidence which might support or contradict the beliefs held. A researcher confronted with this inconsistency might be well advised to drop the topic and move on to other research matters, but I feel that it is more productive to focus squarely on the beliefs themselves and to try to understand their workings, in this case, to examine people's beliefs about the influence of culture and language and try to understand how such beliefs affect people's lives, the lives of both ethnic majority and ethnic minority groups. Perhaps with our focus on belief systems we can better understand the practical importance of cultural and linguistic backgrounds in learning and education and see more clearly ways of ameliorating the learning experiences of young people from "different" background.

Let's start then with the working hypothesis that most people believe that cultures differ in basic ways and that cultural and linguistic backgrounds shape our personalities and our modes of thought. Beliefs of this sort are rooted in the early socialization of children. For instance, our own cross-national research on children's views of foreigh peoples (Lambert & Klinberg, 1967) indicates that, from infancy on, young children are puzzled about who they are, where the limits of one's own family or community or nation lie, and what criteria should be used to differentiate in-groups from out-groups. Parents, it turns out, become the crucial teachers of children by providing answers to these questions, and what parents typically do (regardless of their "cultural" background) is to draw contrasts for the child between the child's own ethnic group and various other, usually quite distinctive, foreign peoples. This parental training in contrasts among ethnic groups uses the own group as a reference point and typically the own group is stereotyped and presented in a better-than, more favorable light than the comparison groups. Through early education in group contrasts, then, children are likely to pick up the idea that other peoples are different, strange, generally less good, and less dependable. Through schooling, these early-developed beliefs are usually strengthened by training in civics, history and social studies to the extent that this aspect of education draws contrasts of own nation and own social system in comparison with distinctive others in foreign settings, and does so with an ethnocentric bias. Thus education within the family and within the school typically contributes to a belief that one's own national or cultural group is special, and this is done with the best of aims, i.e., of socializing the child, or preparing him to take on constructive roles in his own community and society.

The perception of cultural differences is enhanced as well by people's tendencies to link cultures with specific languages or dialects and these linguistic differences are concrete and real. To the extent that cultural or national differences are more apparent than real, the *languages* associated with particular ethnic groups take on all the more social significance, as though the language differences are used in people's thinking to verify the belief in cultural differences. The tendency to reify the link between a culture and a particular use of language is as characteristic of those who make social judgments of speakers of a foreign language as it is of those so judged. It is not difficult therefore to understand why linguistic minority groups often demand and fight for the right to use their own language as a working or learning language instead of a national or international language that might well be of more practical or utilitarian value. In my view this becomes a powerful emotional issue because the group's *identity* is associated with its distinctive language, and this linguistic distinctiveness becomes an enormously precious personal characteristic which dominates that group's system of beliefs. Because culture and language become linked in people's thinking, the more one questions the reality of differences in culture, the more important the distinctiveness of the language becomes.

We can start then with the proposition that linguistic distinctiveness is a basic component of personal identity for members of an ethnic group; ethnicity and language become associated in people's thinking, the thinking of those outside a particular ethnic group as well as those within the group. With these assumptions about people's belief systems as a reference point, I would like to discuss with you certain socially relevant questions about culture, language and learning that a group of us at McGill are trying to answer. The questions are:

1. Do people's beliefs about culture and language affect the learning process? More specifically, do beliefs about a particular ethnolinguistic group influence learners in their attempts to master that group's language?
2. Is there any basis to the belief that in becoming bilingual or bicultural one dulls his cognitive powers and dilutes his identity?

3. Should minority groups try to maintain their ethnolinguistic identities and heritages in the North American setting?

These questions are interdependent. The first suggests a need to test whether beliefs are really important for the learning process, specifically whether people's beliefs about a particular cultural group affect their efficiency in attempts to learn that group's language. The first question also prompts us to explore how the beliefs of members of ethnic minority groups influence their willingness to maintain their own distinctive language. In other words, the first question requires us to examine the ways beliefs about a cultural group get associated with the language spoken by that group and, through such an association, affect the language learning process. The second question concerns the sacredness of the language-culture link by exploring the not-uncommon belief that in becoming bilingual and bicultural (that is, violating the one language-one culture rule), one deteriorates his cognitive powers and the clarity of his cultural identity. The answer to the third question depends on the answers to the other two. Depending on the veridicality of the belief that bilingualism and bi-culturalism are debilitators, and on the importance of beliefs about language and culture in the learning process, we would approach the adjustment problems of ethnolinguistic minority groups in quite different ways. Our major goal, then, is to pose questions that will suggest appropriate ways of helping America's ethnolinguistic minority groups who, more than most others, may become victims of belief systems, other poeple's as well as their own.

Do beliefs about a particular ethnolinguistic group affect the efficiency of learning that group's language?

Robert Gardner and I first became interested in people's beliefs about foreign groups in the context of learning and teaching foreign languages (see Gardner & Lambert, 1972). How is it, we asked ourselves, that some people can learn a second or foreign language so easily and so well while others, given what seem to be the same opportunities to learn, find it almost impossible? With this as a start, we began to wonder about the more general question of what it is to have a knack for languages. To say that one has to have "an ear for languages" is to give an excuse rather than an answer, since it is too easy to transfer mysteries to biology, either as the source of one's linguistic difficulties or as the source of one's linguistic genius.

Perhaps the knack for languages lies in a profile of abilities or aptitudes that develop differently from person to person, some profiles favoring the language-learning process more than others. This idea makes good sense, but there is likely something more to it than aptitudes. Everyone or almost everyone learns his native language painlessly, so why would not everyone have at least a minimally adequate aptitude profile? And history makes it clear that when societies want to keep two or more languages alive, and learning more than one is taken for granted, everyone seems to learn two or more as a matter of course. As social psychologists we believed that there was something more involved. We expected that success in mastering a foreign language would depend not only on intellectual capacity and language aptitude but also on the learner's perceptions of and beliefs about the other ethnolinguistic group, his attitudes towards representatives of that group, and his willingness to identify enough to adopt the distinctive aspects of the behavior, linguistic and nonlinguistic, that characterize that other group. The learner's motivation for language study, it follows, would be determined by his attitudes and readiness to identify and by his orientation to the whole process of learning a foreign language. We saw many possible forms the student's orientation could take, two of which we looked at in some detail: an "instrumental" outlook, reflecting the practical value and advantages of learning a new language, and an "integrative" outlook, reflecting a sincere and personal interest in the people and culture represented by the other group. It was our hunch that an integrative orientation would sustain better the long-term motivation needed for the very demanding task of second-language learning, and here we had in mind students in North American contexts studying the popular European languages. For the serious student who in time really masters the foreign language, we saw the possibility of a conflict of identity or alienation (we used the term "anomie") arising as he became skilled enough to become an accepted member of a new cultural group. His knowledge of the language and the people involved would both prepare him for membership and serve as a symptom to members of the other group of his interests and affection. Thus the development of skill in the language could lead the language student ever closer to a point where adjustments in allegiances would be called for.

In our early studies with English-speaking Canadians in Montreal, we found support for such a theory: achievement in French, studied as a second language at the high school level, was dependent upon linguistic aptitude and verbal intelligence on the one hand, and, quite independent of aptitude, on a sympathetic set of beliefs towards French people and the French way of life. It was this integrative orientation that apparently provided a strong motivation to learn the other group's language. In the Montreal setting, students with an integrative orientation were more successful in second-language learning than those who were instrumentally oriented.

A follow-up study (Gardner, 1960) confirmed and extended these findings, using a larger sample of English Canadian students and incorporating various measures of French achievement. In this case it was difficult to dissociate aptitude from motivational variables since they emerged in a common factor that included not only French skills stressed in standard academic courses but also those skills developed through active use of the language in communication. Apparently, in the Montreal context, the intelligent and linguistically gifted student of French is more likely to be integratively oriented, making it more probable that he could become outstanding in all aspects of French proficiency. Still in the same study, the measures of orientation and desire to learn French emerged as separate factors, independent of language aptitude, and in these instances it was evident that they play an important role on their own, especially in the development of expressive skills in French. Further evidence from the intercorrelations indicated that this integrative motive was the converse of an authoritarian ideological syndrome, opening the possibility that basic personality dispositions may be involved in language-learning efficiency. The integrative motive, incidentally, is not simply the result of having more experience with French at home. Rather it seems to depend on the family-wide attitudinal disposition.

The same ideas were tested out in three American settings (communities in Louisiana, Maine and Connecticut) with English-speaking American high school students learning French. Although each community has its own interesting patterns of results, the role played by attitudes towards one's own group and towards foreign groups emerged again as an important influence on the learning process.

Attitudes of this sort also affect the language learning of French-American young people in these settings as it effects the ways they adjust to the bicultural demands made on them. For example, it became evident in our investigation that the attitudes of French-American adolescents towards their own ethnolinguistic group and towards the American way of life can influence their development of linguistic skills in French and English, leading in some instances to a dominance of French over English, in other cases of English over French, and in still others bilingual competence. The outcome seems to be determined, in part at least, by the way the young French-American handles the conflicts of allegiances he is bound to encounter. For instance, we found in Louisiana that positive attitudes of French-American teenagers towards the French-American culture, coupled with favorable stereotypes of the European French were highly correlated with expressive skills in French. Other types of outlook, however, seem to restrict the potential development of these young people. Thus, a very strong pro-French attitudinal bias or an exceptionally strong motivation and drive to learn French do not automatically promote outstanding competence in the French language. Nor does a strong pro-American outlook assure proficiency in English.

Certain modes of adjustment were especially instructive in the sense that they provide the young French-American with models of how best to capitalize on his bicultural heritage. In Louisiana, for example, students who had very favorable attitudes towards their own cultural group and who also had a good competence in English were outstanding on various measures of proficiency in French. This pattern suggests that French-Americans who are content and comfortable with both facets of their cultural and linguistic heritage are psychologically free to become full bilinguals. In Maine we noted a somewhat different type of adjustment, one of equal interest: French-American students with a strong instrumental orientation toward French study and who receive parental encouragement to do well in French demonstrate outstanding skills in various aspects of French and feel assured of their competence in both French and English. Realizing that "instrumental" has a quite different meaning for students learning their own language, this family-supported instrumental approach offers the French-American a real chance of being both French and American.

To test further these notions, we wondered whether they would apply in more foreign settings and this led us to the Philippines where a foreign language, English, has become not only a second national language but also the medium of instruction from the early grades on and an essential language for economic advancement and success. For the Philippine study we had to shift attention from French to English and from France to America. It also meant reworking the content of many of our measures and changing our expectations about student reactions, for in this case the language being offered has enormous instrumental value. The results of this investigagion brought to light certain cross-nationally stable relationships and certain others that are tied to particular cultural contexts. For example, we found that Filipino students who approach the study of English with an instrumental orientation and who receive parental support for this outlook were clearly successful in developing proficiency in the language. Thus, it seems that in settings where there is an urgency about mastering a second language – as there is in the Philippines and in North America for members of linguistic minority groups – the instrumental approach to language study is extremely effective. Nevertheless, for another subgroup of Filipino students, an integrative orientation toward the study of English had a striking effect on proficiency, especially the audio-lingual aspects. This cross-cultural support for the importance of motivational and attitudinal dispositions strengthens greatly our confidence in the basic notions we started with. But still the Philippine investigation changed our perspective on the instrumental-integrative contrast. We see now that the typical student of *foreign* languages in North America will profit more if he is helped to develop an integrative outlook toward the group whose language is being offered. For him, an instrumental approach has little significance and little motive force. However, for members of ethnic minority groups in North America as for those living in nations that have imported prestigious world languages and made them important national languages, the picture changes. Learning a *second* language of national or worldwide significance is then indispensable, and both instrumental and integrative orientations towards the learning task must be developed. The challence for these minority groups or those who import languages is to keep their own linguistic and cultural identity alive while mastering the second language, and in this regard various findings indicate that becoming bilingual does not mean losing identity. In fact, we are now convinced that striving for a comfortable place in two cultural systems may be the best motivational basis for becoming bilingual which in turn is one's best guarantee for really belonging to both cultures.

These investigations make it very clear that beliefs about foreign peoples and about one's own ethnicity are powerful factors in the learning of another group's language and in the maintenance of one's own language.

> *Is there any basis to the belief that in becoming bilingual or bicultural one dulls his cognitive powers and dissipates his identity?*

Effects on cognition

The technical literature on the consequence of becoming bilingual and/or bicultural stretches back to the turn of the century and is still growing. In the early literature (1920s and 30s) we find a generally pessimistic outlook on the effects of bilingualism, but since the 1960s there is a much more optimistic picture emerging. Bilingualism and biculturalism, as one might expect, generate much emotional and political steam and this often clouds whatever facts are available. In general, the researchers in the early period expected to find all sorts of problems, and they usually did: bilingual children, relative to monolinguals, were behind in school, retarded in measured intelligence, and socially adrift. One trouble with most of the early studies was that little care was taken to check out the essentials before comparing monolingual and bilingual subjects. Thus, social class background, educational opportunities and the like were not controlled, nor was much attention given to determining how bilingual or monolingual the comparison groups actually were. But even though there were grounds to worry about the adequacy of many of these studies, there was nonetheless an overwhelming trend in the outcomes: the largest proportion of these investigations concluded that bilingualism has a detrimental affect on intellectual functioning, a smaller number found little or no relation between bilingualism and intelligence, and two only suggested that bilinguaiism might have favorable consequences on cognition.

With this picture as background, Elizabeth Peal and I started an investigation on the bilingual-monolingual topic in 1962 in the Canadian setting. We, of course, had strong expectations of finding a bilingual deficit as the literature suggested, but we wanted to pinpoint what the intellectual components of that deficit were in order to develop compensatory education programs. We argued that a large proportion of the world's population is, by the exigencies of life, bound to be bilingual, and it seemed to us appropriate to help them, if possible.

We were able in our first investigation to profit from most of the shortcomings of earlier research, making us feel relatively confident about the results (see Lambert & Anisfeld, 1969). What surprised us, though, was that French-English bilingual children in the Montreal setting scored significantly ahead of carefully matched monolinguals both on verbal and non-verbal measures of intelligence. Furthermore the patterns of test results suggested to us that the bilinguals had a more diversified structure of intelligence, as measured, and more flexibility in thought.

For someone who doesn't really believe that language influences thought, these results, suggesting the possibility that bilingualism — a double-language experience — might affect the structure and flexibility of thought, came as a double-barreled surprise. But one investigation rarely has enough weight to change the course of events, even though an important follow-up study (Anisfeld, 1964) confirmed the 1962 conclusions. What was needed was confirmation from other settings and from studies using different approaches.

Since then confirmations have started to emerge from carefully conducted research around the world, from Singapore (Torrance et at., 1970), Switzerland (Balkan, 1971), South Africa (Iranco-Worrall, 1972), Israel and New York (Ben-Zeev, 1972), western Canada (Cummins & Gulutsan, 1973), and, using a quite different approach, from Montreal (Scott, 1973). All of these studies (and we found no others in the recent literature to contradict them) indicate that bilingual children relative to monolingual controls, show definite advantages on measures of "cognitive flexibility," "creativity," or "divergent thought." Sandra Ben Zeev's study, for example, involved Hebrew-English bilingual children in New York and Israel and the results strongly support the conclusion that bilinguals have greater "cognitive flexibility." In this case, the term means that bilinguals have greater "skill at auditory reorganization" of verbal material, a much more "flexible manipulation of the linguistic code" and are more advanced in "concrete operational thinking" as these were measured in her investigation. Anita Ianco-Worrall's study involved Afrikaans-English bilingual children in Pretoria, South Africa and it lends equally strong support for a somewhat different form of cognitive flexibility, an advantage over monolingual controls in separating word meaning from word sound. The conclusion is drawn that the bilinguals were between two and three years advanced in this feature of cognitive development which Leopold (1949) felt to be so characteristic of the liberated thought of bilinguals. Worral also found good support for a bilingual percocity in realizing the arbitrary assignment of names to referents, a feature of thinking which Vygotsky (1962) believed reflected insight and sophistication.

The recent study by Sheridan Scott (1973) involving French-English bilinguals in Montreal is perhaps the most persuasive. She worked with data collected over a seven year period from two groups of English-Canadian children. One group had become functionally bilingual in French during the time period because they had attended experimental classes where most of the instruction had been conducted in French. The other group had followed a conventional English-language education program. At the grade 1 level, the two groups had been equated for measured intelligence, socio-economic background, and parental attitudes towards French people. In fact, had the opportunity been presented to them, it is likely that most of the parents in the control group would have enrolled their children in the experimental French program, but no such opportunity was available since it was decided in advance to start one experimental class per year only (see Lambert & Tucker, 1972).

Scott was interested in the effect becoming bilingual would have on the cognitive development of the children, in particular, what effect it would have on the children's "divergent thinking," a special type of cognitive flexibility. The term was apparently introduced by Guilford (1950), (1956) to characterize a cognitive style that contrasts with "convergent thinking." Convergent thinking is measured by tests that provide a number of pieces of information which the subject must synthesize to arrive at a correct answer; thus, the information provided funnels in or converges on a correct solution. Divergent thinking provides the subject a starting point for thought – "think of a paper clip" – and asks the subject to generate a whole series of permissible solutions – "and tell me all the things one could do with it." Some researchers have considered divergent thinking as an index of creativity (e.g., Getzels & Jackson, 1962) while others suggest that until more is known it is best viewed as a distinctive cognitive style reflecting a rich imagination and an ability to scan rapidly a host of possible solutions.

Scott was interested, among other things, in whether bilingualism promotes divergent thinking. Her results, based on a multivariate analysis, show a substantial advantage for the bilingual over the monolingual children on the divergent thinking tests, and in this investigation one can examine the year-by-year development of the advantage. Her study opens up many interesting possibilities for more in-depth analysis of the bilingual's thought processes.

There is than an impressive array of evidence accumulating that argues plainly against the common sense notion that becoming bilingual, i.e., having two strings to one's bow or two linguistic systems within one's brain, naturally divides a person's cognitive resources and reduces his efficiency of thought. Instead one can now put forth a very persuasive argument that there is a definite cognitive advantage for bilingual over monolingual children in the domain of cignitive flexibility. Only further research will tell us how this advantage, assuming it is a reliable phenomenon, actually works: whether it is based on a better storage of information by bilinguals, whether the separation of linguistic symbols from their referents or the ability to separate word meaning from word sound is the key factor, whether the bilingual contrasts of linguistic systems aids in the development of general conceptual thought, or whatever. In any case, this new trend in research should give second thoughts to those who have used the bilingual deficit notion as an argument for melting down ethnic groups. Hopefully, too, it will provide a new insight to those ethnolinguistic groups who may also have been led to believe in the notion of a likely deficit attributable to bilingualism.

One feature of the studies just reviewed merits special attention: all the cases reported (those in Singapore, South Africa, Switzerland, Israel, New York, Montreal) dealt with bilinguals using two languages both of which have social value and respect in each of the settings. Thus, knowing Afrikaans and English in South Africa, Hevrew and English in New York and Israel, or French as well as English for English-speaking Canadian children would in each case be adding a second, socially relevant language to one's repertory of skills. In no case would the learning of the second language portend the dropping or the replacement of the other as would typically be the case for French-Canadians or Spanish-Americans developing high-level skills in English. We might refer to these as examples of an *additive* form of bilingualism and contrast it with a more *subtractive* form experienced by many ethnic minority groups who because of national educational policies and social pressures of various sorts are forced to put aside their ethnic language for a national language.

Their degree of bilinguality at any point in time would likely reflect some stage in the subtraction of the ethnic language and its replacement with another. The important educational task of the future, it seems to me, is to transform the pressures on ethnic groups so that they can profit from an additive form of bilingualism, and, as we'll see in the final section, projects with these aims run up against beliefs and attitudes of another sort.

Effects on identity

What about the notion that becoming bilingual and bicultural subtracts, through division, from one's sense of personal identity? Here too, there are signs in the recent literature of interest in this topic, but there are still only a few studies to draw on. Three, however, do bear on the issue of the identity of bilinguals, and all three are encouraging in their outcomes.

The first is the study, mentioned earlier, of French-Americans in communities in New England and Louisiana (Gardner & Lambert, 1972) and their ways of coping with a dual heritage: some oriented themselves definitely toward their French background and tried to ignore their American roots; others were tugged more toward the American pole at the expense of their Frenchness; and still others apparently tried not to think in ethnic terms, as though they did not consider themselves as being either French or American. These three types of reactions parallel closely those of Italian-American adolescents studied earlier by Child (1943). To me these ways of coping characterize the anguish of members of ethnic groups when caught up in a subtractive form of biculturalism, that is, where social pressures are exerted on them to give up one aspect of their dual identity for the sake of blending into a national scene. We will return to these three reaction styles later when we can contrast them with a fourth style which reflects an additive form of biculturalism that also turned up in our study of French-Americans. The important point here is that identities are fragile and they can, through social pressures, be easily tipped off balance.

Identities need not be so disturbed, though, as the study of Aellen and Lambert (1969) showed. In this case we were interested in the adjustments made by adolescent children of English-French mixed marriages in the Montreal setting. We examined the degree and direction of the offspring's ethnic identifications as well as a selected set of their attitudies, values, and personality characteristics.

The children of these mixed marriages come in contact with and are usually expected to learn the distinctive social and behavioral characteristics of the two cultures represented in their families. The question is whether the demands made on them necessarily generate conflicts, whether the experience with two cultures possibly broadens and liberalizes the child, or whether some combination of both outcomes is typical. In addition to the cultural demands made on them, the children of mixed ethnic marriages may face other difficulties to the extent that their parents, as suggested by Gordon (1966) and Saucier (1965), may have married outside their ethnic group because of personal instability and immaturity. Much of the previous research suggests that persons who intermarry in this way often have relatively strong feelings of alienation, self-hatred, and worthlessness, and are disorganized and demoralized. Mixed ethnic children might well find it difficult to identify with their parents if these characteristics are typical or representative. Still, the offspring could develop understanding and sympathy for parents with such an outlook. On the other hand, people may intermarry in many instances because they have developed essentially healthy attitudes and orientations which are nonetheless inappropriate within their own ethnic group, making intermarriage with a sympathetic outsider garticularly attractive. They may have become, like Park's marginal man, "the individual with the wider horizon, the keener intelligence, the more detached and rational viewpoint . . . always relatively the more civilized human being" (Park, 1964, p. 376). In that case, their children might be particularly well trained in tolerance and openmindedness, especially since the children, themselves, are likely to feel that they, unlike their parents, are automatically members of *both* ethnic groups. The purpose of this investigation was to examine both these possibilities as objectively as possible by comparing groups of adolescent boys of mixed French-English parentage with others of homogeneous background, either French or English. All groups in the comparison were similar as to age, socioeconomic class, intelligence and number of siblings.

It was found that the profile of characteristics of the boys with mixed ethnic parentage is a healthy one in every respect when comparisons are made with groups from homogeneous ethnic backgrounds; they identify with their parents, especially with their fathers, as well as the comparison groups do; they relate themselves to and identify with both ethnic reference groups, this being particularly so for those in a French academic environment; they show no signs of personality disturbances, social alienation, or anxiety; nor do their self concepts deviate from those of the comparison subjects; they see their parents as giving them relatively more attention and personal interest, and their attitudes towards parents are as favourable as those of the comparison groups; they seek out distinctively affectionate relationships with peers; their general attitudinal orientations are similar to those of the comparison groups while their specific attitudes towards both English and French Canadians are relatively unbiased; their values show the influence of both ethnic backgrounds as do their achievement orientations which are less extreme than those of the comparison groups. Rather than developing a divided allegiance or repressing one or both aspects of their backgrounds, as has been noted among the offspring of certain immigrant groups (Child, 1943), they apparently have developed a dual allegiance that permits them to identify with both their parents, and to feel that they themselves are wanted as family members, One of the mixed ethnic boys summed up this finding by saying: "I respect both my parents, and I respect their origins." One might argue that the concern of the parents of mixed ethnic adolescents to "include" their children is exaggerated, a symptom of tension and value conflict, but such an interpretation is negated by the apparent success these parents have had in passing on a sense of being wanted. There are, however, many features of this pattern of results that need further study.

This profile sketch is more pronounced for the mixed ethnic subjects who are part of the French-Canadian high school environment. These young people may be more susceptible to the English-Canadian culture than those attending English-Canadian schools would be to French-Canadian culture because of the Canadian cultural tug of war which seems, at least until recently, to be controlled by the more powerful and prestigious English-Canadian communities (see Lambert, 1967).

Two general modes of adjustment to a mixed ethnic background became apparent. In one case, these young men incorporate both ethnic streams of influence, which are either modified by the parents before they are passed on to their children, or are tempered by the adolescents themselves, so that they are less extreme than those represented by either of the major reference groups. A tendency to amalgamate both cultural streams of influence is suggested by the contrasts noted between the ethnically mixed groups and the homogeneous groups, e.g., the unbiased ethnic identifications of the former, their perceptions of parents as being inclusive, their favourable attitudes towards both English and French Canadians, and their less extreme achievement values. In the other case, they tend to adapt their views to the predominant features of the academic-cultural environment in which they find themselves. This form of adjustment is suggested by the tendency of the mixed ethnic groups to line up with the respective homogeneous groups with whom they attend high school, e.g., their choices of the values they hope to pass on to their own children, the personality traits they see as undesirable, and their judgments of the relative attractiveness of English-Canadian or French-Canadian girls.

This illustration provides hope for biculturality in the sense that offspring of mixed-ethnic marriages appear to profit from the dual cultural influences found in their families. Rather than cultural conflicts, we find well adjusted young people with broad perspectives who are comfortable in the role of representing both of their cultural backgrounds. We also have here an illustration of the additive form of biculturalism; the boys studied were caught in the flow of two cultural streams and were apparently happy to be part of both streams.

There is a similar type outcome in the investigation, mentioned earlier, conducted by Richard Tucker and myself (Lambert & Tucker, 1972) concerning the English-Canadian children who took the majority of their elementary schooling via French, and who after grades 5 and 6 had become functionally bilingual. Here we were able to measure on a yearly basis their self conceptions and their attitudes towards English-Canadian, French-Canadian and French-French ways of life. The attitude profiles of the children in the Experimental French program indicate that by the fifth grade important affective changes have occurred during the course of the project. The children state that they enjoy the form of education they are receiving and want to stay with it; their feelings toward French people have become decidedly more favorable; and they now think of themselves as being both French- and English-Canadian in personal makeup. It is this apparent identification with French people — those from Canada and those from Europe — that raises the question of biculturalism. Has the program made the children more bicultural? It is difficult to answer this question because the meaning of bicultural is so vague. It is certain that the children how feel they can be at ease in both French and

English-Canadian social settings, and that they are becoming both French and English in certain regards; but not becoming less English as a consequence. It is certain too they have learned that in classes with European-French teachers they should stand when a visitor enters while they need not stand in classes that are conducted by English-Canadian or French-Canadian teachers. We wonder how much more there is to being bicultural beyond knowing thoroughly the languages involved, feeling personally aligned with both groups, and knowing how to behave in the two atmostpheres. Are there any deeper personal aspects to cultural differences? That is, does culture actually affect personality all that much or is it perhaps a more superficial and thinner wrapping than many social scientists have suggested?

The attitudes of the parents at the start of the project were basically friendly and favorable, although marked with very little knowledge about the French-Canadian people around them. These parents wanted their children to learn French for essentially integrative reasons – getting to know the other ethnic group and their distinctive ways – but they did not want them to go so far as to think and feel as French Canadians do, in other words to lose their English-Canadian identity. How will they interpret the attitudes of their children who by grade 5 come to think of themselves as being both English- and French-Canadian in disposition and outlook? Some may see this as a worrisome sign of identity loss, but we believe they will come to interpret their children's enjoyment in having both English- and French-Canadian friends and both types of outlooks as a valuable addition, not a subtraction or cancellation of identities. As we see it, the children are acquiring a second social overcoat which seems to increase their interest in dressing up and reduces the wear and tear placed on either coat alone. Our guess is that the children are beginning to convince any worried parents that the experience is, in fact, enriching and worthwhile.

Of course, the parents cannot share fully their children's experience or their development of a dual identity. Nevertheless, in the few noticeable cases where the divergence of views between parents and children has become very apparent, even those parents give the impression that they are pleased that their children are being prepared to take their place in a new type of multilingual and multicultural society and help shape its development. As parents, they can easily take pride in the fact that they have gone out of their way to help in this special type of preparation.

These studies suggest to us that there is no basis in reality for the belief that becoming bilingual or bicultural necessarily means a loss or dissolution of identity. We are aware of the possible pressures that can surround members of ethnolinguistic minority groups and make them hesitant to become full-fledged members of two cultural communities. At the same time, though, we see how easy and rewarding it can be for those who are able to capitalize on a dual heritage. The question of most interest, then, is how in modern societies these possibilities can be extended to ethnolinguistic minority groups, the major issue of the section to follow.

Should minority groups try to maintain their ethnolinguistic identity and heritage in the North American setting?

In order to suggest an answer to this question, it seems to me that we need first to examine in more detail the types of conflicts ethnolinguistic groups in North America can encounter in their attempts to adjust to the bicultural demands made on them. Hopefully through this exploration we will be able to discern which factors in the society lead to crises of allegiances and which provide opportunities for a comfortable bicultural identity. To this end, we will start with the case of French Canadians and their continuing struggle to survive as an ethnic group. Perhaps through a brief survey of Canadian research we can get perspective on the general problems faced by ethnic minorities.

A series of investigations was started in 1958 with French Canadian (FC) and English Canadian (EC) residents of Montreal, a setting with a long history of inter-ethnic group tensions. The research technique employed in these studies, referred to as the "matched-guise" procedure, has groups of subjects drawn from various age and social class levels of the EC and FC communities give their impressions or evaluations of the personality characteristics of speakers who represent their own and the other ethnic group. Thus, groups of EC and FC subjects are asked to estimate or judge the probable personality traits of a number of speakers, say 12, presented to them on tape. Half of the speakers use French and half use English while reading a standard translation-equivalent passage. Listeners are kept in the dark about the fact that each speaker they hear is a balanced French-English bilingual and the reactions elicited by each speaker's two linguistic guises are later matched up and compared statistically (see Lambert, 1967; Giles, 1971). The procedure has proved instructive and useful as a means of investigating social tensions in bicultural or multiethnic settings such as Quebec (see Lambert, 1970) Israel, (Lambert, Anisfeld & Yeni-Komshian, 1965), and Great Britain (Giles, 1971a).

The early research showed that EC college students evaluate the personality of speakers more favorably when the speakers use their EC rather than their FC linguistic guise. Furthermore, and somewhat surprising, FC students showed the same tendency, in a more exaggerated form; that is, they too, rated the EC guises of speakers much more favorably than the FC guises (Lambert, 1967). Apparently then both ECs and FCs attribute different status and different degrees of respect to those who represent the EC and FC communities in French Canada.

But there are in Quebec various forms of French currently in use, and each of these is also given its own position in the status hierarchy. For example, Chiasson-Lavoie and Laberge (1971) recently found evidence of a linguistic insecurity among working class FCs in Montreal. D'Angeljan and Tucker (1973) also report on a similar type of language sensitivity which shows itself in an overattention to correctness of speech among working class FCs and a marked preference for European style French by FCs of various regional and occupational backgrounds. Thus FCs tend to react, as minority groups often do, by downgrading their own characteristic modes of behavior, including speech.

These sociolinguistic phenomena also affect the fate and durability of social contact between members of various ethnic and linguistic groups. For instance, the status relations and role expectations of the two or more people involved in social interaction are likely colored by the inferences each actor makes of the others, inferences that are based to an important extent on speech styles (Giles 1971b; 1972).

The dilemmas are not merely those of college-age people in the FC community, for youngsters also get involved, and in this case too there are no signs of amelioration when 1960 and 1970 research is compared. In 1962 Elizabeth Anisfeld and I (Anisfeld & Lambert, 1964) examined the reactions of ten-year-old FC children to the matched guises of bilingual youngsters of their own age reading French and English versions of a standard passage and found that the FC guises of the speakers were rated more favorably than the EC guises on a whole series of traits.

Currently, Sylvie Lambert (1973) has taken a further and more extensive look at the ten-year-old FCs self views. Her results, collected in 1972, suggest that FC ten-year-olds downgrade representatives of their own ethnolinguistic group to a marked degree in comparison with representatives of the European French (EF) community, and on a selection of traits related to social attractiveness (e.g., interestingness, amusingness, sureness of self), they evaluate their own group less favorably than ECs. What is particularly instructive about this study is that is included the views of FC school teachers, and it was found that FC elementary school teachers have essentially the same profiles of stereotypes as the ten-year-olds. The social implications of these trends and the changes noted over a ten year period are enormous.

All told, these research findings indicate that little has been done in North America to help ethnolinguistic minority groups maintain respect in their linguistic and cultural heritage so that they could become full-fledged bicultural members of their national society. There are, however, several recent developments in the American society that hold out a new and exciting type of hope. These developments, in fact, constitute another instance where the U.S.A. has an opportunity to set an outstanding example of what can be done for ethnic minority groups. The first development is a new perspective, generated it seems by the critical self analysis of collegiate activists in the 60s, on what it means to be American. It was American collegiates who demanded national respect for minority groups of every variety, including Afro-Americans and American-Indians. As a nation, these young people argued, we have no right to wash out distinctive traditions of any minority group since their ways of life, relative to the so-called American way of life, are in many respects admirable.

The second development, which may have stemmed from the first, takes the form of a national willingness to help minority gruops. One way this winningness to help manifests itself is in new educational laws that provide extensive schooling in Spanish for Spanish-Americans in America's large centers, in the passage of the Bilingual Education Act, and in new laws passed in states such as Massachusetts which provide schooling in any number of home languages whenever a group of parents request it.

The third development is a new direction in psycholinguistic research which, although only now getting underway, indicates that the hyphenated American can perhaps most easily become fully and comfortably American if the Spanish, the Polish, the Navajo or the French prefix is given unlimited opportunity to flourish. For example, the research of Padilla and Long, 1969; (see also Long and Padilla, 1970) indicates that Spanish-American children and adolescents can learn English better and adjust more comfortably to America if their linguistic and cultural ties with the Spanish speaking world are kept alive and active from infancy on. Peal and Lambert (1962) came to a similar conclusion when they found that FC young people who are given opportunities to become bilingual are more likely than monolinguals to be advanced in their schooling in French schools, to develop a diversified and flexible intelligence, and to develop attitudes that are as charitable towards the other major Canadian cultural group as their own. A similar conclusion is drawn from the recent work of Lambert and Tucker (1972) where EC youngsters are given most of their elementary training via French. These children too seem to be advanced, relatively, in their cognitive development, their appreciation for French people and French ways of life, and their own sense of breadth and depth as Canadians.

In view of these sympathetic and supportive new developments, is it now possible to assist the hyphenated American to become fully and comfortably bilingual and bicultural? Is it now possible to counteract and change the reactions of ethnically different children in America so that they will no longer feel different, peculiar and inferior whenever they take on their Spanish, Portuguese, Polish, Navajo or French styles of life as a temporary replacement for the American style?

Asking ourselves these questions prompted us to start a community-based study in Northern Maine (Lambert, Giles, Picard, 1973). The setting for the investigations was Maine's St. John Valley area, an American peninsula that protrudes into the Quebec and New Brunswick Provinces. The closest "Anglo" community is nearly 50 miles to the south of Madawaska, center of the St. John Valley. The ties are much closer on a personal, social and cultural level with French New Brunswick and Quebec than with the rest of the state of Maine. The total valley region is made up of approximately 70-75% French Canadian descendants with the local language still a strong part of the way of life.

The research questions that shaped the investigation took the following form:

(1) How do America's ethnolinguistic groups adjust to the bicultural demands made on them? Is it typical for

French-Americans in New England, for example, to reject their ethnolinguistic affiliations and identify more closely with the majority English speaking culture? What is the developmental nature of changes that take place in their ethnic identity? In psycholinguistic terms, would the typical French-American evaluate speakers of English more favorably than speakers of one of the various forms of French?

(2) Does participation in a bilingual education program influence children's attitudes towards the various forms of French, and if so, in what direction?

To provide at least partial answers to these questions, different subgroups of people living in Maine, some from the Valley region and some from outside, some French-American and others not, were asked to listen and give their subjective reactions to a variety of speech styles as presented by adult native speakers of one or another of the styles. The speech styles decided on were: European French (EF); middle class French Canadian (mcFC); lower class French Canadian (lcFC); middle class Madawaskan French (mcMF); lower class Madawaskan French (lcMF); middle class Madawaskan English (mcME); and middle class non-regional English (nrE).

Three groups of listeners were decided on so that we could examine age changes in the reactions of native French-Americans. In the first study, attention was directed to the evaluative reactions of two groups of college students, one French-American and the other comprising non-French-Americans who live outside the St. John Valley. In the second study, our focus was on French-American high school students from the Valley region, and in the third study on French-American ten-year-olds, some of whom with training in French (i.e., via French) for four years under the Title VII Bilingual Program, and others without such a program of training in French.

The listeners in the three studies were required to evaluate each speaker separately by rating him or her on bipolar adjectival trait scales (e.g., good-bad, wise-foolish, and so on). The traits finally used were selected after preliminary testing in the Valley schools and colleges that permitted us to identify those personality qualities seen as valuable and worthwhile by each age group. The details of these investigations are available eslewhere (Lambert, Giles, & Picard, 1973) but the general outcomes are particularly pertinent.

(1) *Do French-American young people typically reject*

their French affiliation and identify more closely with the majority English-speaking culture?

Considering the findings of all three studies, this matter can be examined developmentally. There is substantial evidence to suggest that at the age of ten, the typical French-American youngster from Maine's Valley region who follows a conventional all-English curriculum in public school rejects his French ethnicity and orients himself to the English-speaking American as a model. The ethnic allegiances that he does have are apparently limited to his own ethnolinguistic group, the lower class, local French community, but even in this instance his affiliations are ambivalent and potentially self-effacing. The influence of European French as a model appears to be minimal at this age, although the EV speakers are perceived more favorably than are French Canadians.

By adolescence, however, a different ethnic orientation seems to develop. Thirteen- to seventeen-year-old French-Americans from the Valley also appear to orient themselves towards the English-speaking American model, but other factors come into play which tend to reduce this model's impact. For instance, European French people are seen to be as competent (e.g., intelligent, determined and confident, etc.) and as attractive socially as Americans, judging from the reception given to nrE and mcME style speakers. Also in the eyes of the adolescent, the middle class version of the local French dialect (mcMF has assumed an advantage over the working class counterpart (lcMF) in the sense that it is judged as favorably as the English models or the EF in terms of social attractiveness.

College students in the Valley region appear to have equally sympathetic attitudes toward European and local forms of French as towards English. That is, English no longer has a pre-eminent position in the heirarchy. This finding is of special interest because it could mean that the French-American elite who go on to college have developed an understanding and appreciation for both aspects of their biculturality. This possibility will be checked out carefully with follow-up research, as it has both theoretical and social importance (see Gardner & Lambert, 1972). At any rate, we find that college students judge speakers of the mcMF and EF styles to be as competent as speakers of the various English styles. Stated otherwise, European French and educated local French are considered by the French-American college students to be as appropriate and respected media of social interaction as English.

These results contradict the commonly-held belief that with time members of America's ethnic minority groups become assimilated, which often is taken to mean forgetting about the old country and old-country ways (including language) and becoming "American." In this community we have evidence for an increase through the age levels in appreciation for old country ways in the sense that European and local versions of French are given the same degree of respect as English by college students. It could be that for these young people being "American" implies being French or being ethnic, no matter what variety.*

(2) *How do non-French-Americans from Northern Maine react to the various styles of French, particularly the local variety?*

Unfortunately, we have only the reactions of the college sample from Study I to draw on for an answer. Limited as this base is, the results show clearly that college students living in Northern Maine who are not part of the French-American community also indicate that the mcMF and EF speech styles of French are as acceptable and valuable in their eyes as are the nrE or mcME of English. This subgroup of informants was sensitive to social class differences and showed this by downgrading the lower class variety of local French. The fact that members of the greater "American" culture share the evaluative norms of the French-American population of Northern Maine must be seen as a most favorable and optimistic sign, one that makes it all the more necessary that this finding be verified through replications of the same type of study with other than college students and in various regions of New England.

(3) *Does experience in a bilingual education program influence French-American children's attitudes towards the French and English languages?*

The findings from our third study certainly suggest that substantive changes are made by French instruction in the children's attitudes towards their two languages. It was found that the No Program children were strongly Anglo oriented in their evaluative reactions whereas the children with experience in the bilingual education program were, in contrast, much more favorably disposed toward French. Indeed, the Program children's outlook toward French was much more like the older age groups studied, except that they did not rate mcMF as favorably as the high school and college-age students did and they had a more favorable orientation toward Canadian style French than did the older age groups. Judging from the attitudes of the older subjects one might anticipate that in time the mcMF style would naturally attain more prestige for these children. Of course, the natural development of favorable attitudes towards the local version of French could be jeopardized if the bilingual program in any way belittled the local variety in comparison with the two imported styles — the European and the Canadian. The point is that the planners of bilingual programs should keep prevailing adult preferences in mind, and our evidence is that this community favors European and the educated form of local French.

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*We are aware, of course, that in these studies we have not systematically controlled for the social class and educational potential of the three age groups brought into comparison (the ten-year-olds, the adolescents, and the college students). Replications of these studies should therefore include young adults in the community who have not had the opportunity of college training to determine if this favorable outlook toward French is general. It would also be valuable to compare the St. John Valley region with other French-American communities to determine if these outlooks are shared by French-Americans.

The results of the third study also suggest that the Program children may have been made overenthusiastic and slightly biased toward French which is in contrast to the more balanced bicultural outlook of the college group investigated. But we have to keep in mind that there is a major difference in the educational experiences of the two groups. The ten-year-olds in the bilingual program are being schooled in part through French, and the value of being French is unmistakably introduced to the children via the program. The older students have never had such an experience; they followed a conventional all English program of schooling designed for "American" students and it is much less likely that they would be literate in French. We can, then, easily understand the enthusiasm of the Program children.

Nevertheless, those responsible for such programs must keep overall goals clearly in mind and aid the children in ultimately making a two-language and two-culture adjustment. My own bias is that a bilingual education program, to be helpful and constructive, should attempt to develop the full potential of ethnolinguistic minority groups so that members can become fully American at the same time as they remain fully French, Polish or whatever. There is an accumulation of evidence that children can very easily become comfortably bicultural and bilingual, and that from this base they can enhance their sense of personal well-being, their sense of social justice, and their tolerance and appreciation of human diversity (see Gardner & Lambert, 1972 and Lambert & Tucker, 1972).

The results of these pilot studies should, then, be heartening to all those involved in the local bilingual education program, since it seems clear that such programs can have a powerful influence on the fate of the cultural and linguistic identities of young members of ethnolinguistic minority groups. Equally satisfying is the realization that the St. John Valley community as a whole, even those who are not members of the minority group, react favorably to the educated version of local French as they do to the European version, making both forms of French as respectable media of communication as English.

Encouraging as these studies are, they are only a start, and we are currently re-doing this type of research in other New England communities. But in my mind there are grounds enough here to answer question 3 in the following way: North American ethnolinguistic groups should be encouraged from as many sources as possible to maintain their dual heritage. Not only are they America's richest human resource, but we are beginning to see where conflicts of allegiances are likely to arise and how these groups can be helped to attain a comfortable bilingual and bicultural way of life by being themselves, making their potential value to the nation all the greater. In my mind, there is no other way for them to be comfortable, for to subtract one of their heritages would be to spoil their chances of adjustment. In other words, I don't think they will be able to be fully American unless they are given every possibility of being fully French, Portuguese, Spanish or whatever as well. And to the extent that this can be done, America will be a greater nation and a more interesting one.

This ends up to be a long paper and I apologize. But I needed all these words to present my personal view of how culture and language affect the learning and education processes. I had first to redirect the reader's thinking from what he might have expected by the title and to present my reasons for scepticism about the conventional treatment of cultural and linguistic influences on thinking and learning. I don't believe culture and language *per se* actually affect the form or structure of thought. But most people believe that they do have this effect and it was to these types of beliefs, held by national groups as well as ethnolinguistic minority groups, that attention was directed. First I tried to demonstrate how influential these beliefs about ethnicity are in the learning process, especially the learning of an ethnic group's language, and in the case of ethnic group members, the maintenance of one's own language. Then examined persistent and nasty beliefs about the disturbances and confusions attendant on bilingualism and biculturalism, and found these beliefs, to my way of thinking, to be false. And because they appear false to me I wanted to re-examine the plight of America's ethnolinguistic minorities with a view of changing people's beliefs about the worthwhileness of giving America's minority groups a real chance to survive and flourish.

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Bilingualism: Is it desirable?

Commentary on Wallace Lambert's Paper

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Social scientists have almost come to assume the thesis that culture and language profoundly affect one's cognitive processes, that people who speak a different language have fundamentally different personalities and structures of thought. Lambert, however, challenges this thesis with the claim that differences in language and culture *do not* indicate significant cognitive or personality differences. There do, however, seem to be many important social implications to maintaining one's language and cultural heritage, and Dr. Lambert elaborates on these while making his case for a system of additive bilingualism.

There are many who would argue for cognitive differences between different ethnolinguistic groups, but Lambert presents evidence both from cross-cultural studies as well as from longitudinal investigations of those who adopt a new language, that this is unlikely. It is the *belief* in cultural differences rather than the *fact* that must be investigated. Because these differences are more psychological than physical does not make them any less important in terms of their effects on behavior. As Dr. Lambert points out, the belief in differences has implications for one's attitude both to one's own ethnolinguistic group and to another enthnolinguistic group. These attitudes in turn seem to affect one's success at learning a language and one's adjustment to society.

Do people actually believe that culture and language produce differences? Lambert does not go into this in any detail but according to several other studies the answer is "yes." When asked to indicate how similar or different two people are, we tend to perceive a great difference between people who speak different languages. A test of this notion with students at the Western Washington campus indicated that language differences were thought to contribute to cognitive differences but not personality ones. A second important factor was the active/passive nature of the ethnic group. This suggests that people do in fact believe in linguistic and cultural differences. These beliefs, according to Lambert, are based in the developmental process of identifying oneself by differentiating one's own group from other groups.

How do these beliefs then affect our language and social behavior? Here Lambert presents a great deal of evidence. In the first place, there seems to be an attitude about how good or bad these differences are. A positive attitude and a specific type of motivation (integrative for learning a secondary language of the society, and instrumental for learning a primary economic one) are important for language learning. Feelings about one's own ethnic ties are also very crucial when learning a second language. In the past most people have focused simply on the attitude to the language being learned. But if one accepts Lambert's argument that self identity and reactions to other groups develop in relation to one another then the importance of self esteem is clear. The English Canadian children who learn to speak French know that their English Canadian culture and language are respected. This is not so true for the ethnic minority children who must learn to speak English. It is important, then, that a person feel comfortable in his own cultural role in order to learn a second language and adjust to the demands of a second culture.

This would seem to be the crucial difference between the bilingual programs which succeed and produce well-adjusted bicultural children as opposed to those which have high drop-out rates and produce children with conflicts. The former is additive bilingualism, by which Lambert means that the two languages are equally respected and so the child ends up with favorable attitudes to both ethnic groups and a self identity which encompasses them both. On the other hand, subtractive bilingualism usually means that the second language is supposed to replace the first. Self identity and attitude seem to reflect this conflict.

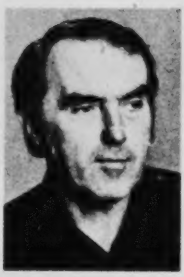
Additive bilingualism not only has a positive effect on attitudes to oneself and others, but it also leads to greater cognitive and social skills. The bilingual has not only mastered two languages, but he has learned what social behavior is appropriate when each language is used. The dual language system also produces greater cognitive flexibility. And here Lambert is not saying that different languages produce different thought patterns but that knowing *any two* languages produces structures which are different from knowing only *one* language. Lambert maintains that a Spanish-speaking American has the same cognitive structures as an English-speaking American; but a bilingual has structures which are different from a monolingual.

Lambert likens the ability to speak a language to a "social overcoat." This analogy reflects his belief that language differences are not profound. But this is not to say that they are superficial. I think the rest of the paper denies this possibility. The phrase refers more to the fact that the implications of language are social in nature, and that they lead to flexibility rather than rigidity. A social overcoat is perhaps something like a social role – it demands certain social skills that are appropriate for the situation and can be changed by going to a different situation. As many role theorists have pointed out, roles can have profound effects on our attitudes, our motivations, our abilities, and our conceptions of ourselves. They are not in any way superficial in the sense of being unimportant.

The reference to language as a social overcoat reflects the striking achievements of bilingual education programs in recent years. Those who regarded language as crucial to cognitive sturctures often claimed that an inferior speech code or a bilingual speech code was reflected in deficient cognitive structures. The research studies of bilingual programs were therefore concerned primarily with assessment of school achievement and other related cognitive skills. The results of the bilingual program in St. Lambert provide convincing evidence that bilingualism does not produce cognitive deficiency. This issue will still be an important one for many years, and according to Lambert it is essential that all bilingual programs show scholastic achievement. On the other hand, another issue has emerged in the wake of the convincing scholastic evidence. Parents and educators are now concerned with the social and emotional consequences of bilingualism. It would seem that Lambert's reference to language as a social overcoat reflects this shift in emphasis from the scholastic to the social effects of bilingual education. Some of the important questions now being asked are: What are the attitudinal changes that take place when learning a second language – attitudes to oneself, to one's own ethnolinguistic group, and to other ethnolinguistic groups generally? To what extent is a person who goes through such a program able to communicate with a peer from that ethnolinguistic group? What are the new social skills that a bilingual learns as a by-product of the language? On this last point, the finding mentioned by Lambert that bilinguals are more cognitively flexible may imply more flexibility in social situations. Recent work conducted in Montreal by Fred Genesee indicates that this is so. English Canadian children in a French school were better able to take the social role of another person when explaining a game in English than their counterparts in an English school. In other words, they showed less egocentric communication or greater accommodation to the needs and perspectives of their listener. It would seem then that the acquisition of diverse language skills is reflected in a diversity of cognitive and social skills. It would be important to find out just what social skills are picked up when learning another language and whether those skills or behaviors function only within that language context or generalize to all contexts. For example, does the status differentiation in forms of address in one language generalize to a perception of similar status differentiation when functioning in the other language context? These then are some of the research questions being asked.

More practically-oriented questions focus on the implications of these findings for bilingual education in a multicultural society. Toward whom should bilingual education be directed – the ethnic minorities or the ethnic majority? What dialect should be taught – the one spoken in that region or an international version of the language? My feeling is that ethnic minority and ethnic majority children should be learning both languages together in a bilingual alternate-days or alternate-half-day program. This type of program would facilitate not only second language learning but also cross-cultural communication, the important end-product of bilingualism. The cognitive and social skills discussed previously must be directed toward actual use in cross-cultural contexts before we see the real social benefits of bilingual education. This is not to say that the personal benefits to be derived from bilingualism itself are not important. But bilingual programs must have both individual and social goals – to develop a maximally-functioning individual and positive cross-cultural relationships. This would suggest that, in addition, the dialects learned by those used by the ethnolinguistic group in that region or country; though Lambert stressed that the ethnic minorities themselves be asked first which dialect of Black English, Spanish, French, of Indian they prefer. In certain cases it was found that Blacks wanted their children to be educated in White standard English as opposed to a Black dialect.

Dr. Lambert's ideas and research on bilingual education generally provoke a great deal of argument and strong feelings. But the final criterion for judging ideas and research is whether they lead to testable and successful application. The results of the many investigations conducted by Dr. Lambert and his associates must be critically evaluated, but they do suggest that additive bilingualism has a very diverse range of positive consequences. The continuing nature of this investigation means that we can look forward to equally thought-provoking evidence of the role of language and culture in learning and education.



Thomas A. Billings

Western Washington
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Cultural Tolerance, Learning and Education

Ladies and Gentlemen: When I have concluded my remarks, and that will be in approximately 25 minutes, you will see that those who invited me to speak were desperate. They had run through a list of excellent names and found that all those who might have contributed significantly to the banquet were committed to other engagements or were too wise or too weary to want to be involved. Hence they turned to me knowing full well that I rarely pass up an opportunity to harass my neighbors and that the other distinguished guests here (Professor Jim Beam, Professor Jack Daniesl), would keep anybody from feeling cheated.

It is a pity I wasn't invited to speak on matters of concern to this symposium ten years ago, when I knew infinitely more about them. Ten years ago I knew about everything. My brilliance, in fact, so intimidated and outraged my colleagues, they poked me in the eye with a sharp stick and drove me out of town. They called it "negative reinforcement." Other wars and subsequent wounds have caused a massive erosion of my earlier powers and now, I'm told, I am virtually useless.

Now to be less serious. Unlike my colleagues who have presented their papers before me in this symposium and unlike those who will follow me, my comments are not the fruit of scientific inquiry. I do not pretend to be a scientist and that in no way is meant to question the value of the work done by my colleagues in the fraternity of science. It is only that I found out a long time ago that I am temperamentally and emotionally unsuited for the scientific fraternity. But, thank God, there are other fraternities on the earth, and good ones too, which share with the fraternity of science an interest in the human condition and in human behavior and in the future of human kind. I hope, before I die of a microcardial infarction from smoking too many Camels, to have gained entre into one of these other fraternities.

In a sense, we are all students of human behavior. I suspect it all started with Eve, who, I'll bet, kept a close eye on Adam. It is a pity that Adam failed to keep a close eye on Eve. After we were driven from Paradise, we humans have been watching each other continuously. I suspect that through time, almost all human energy gets used this way, observing our own and our neighbor's behavior. When we aren't immediately involved in our observations, we are engaged in a secondary operation, namely, puzzling about our observations. It goes on continuously: Israelies watch Arabs, Russians watch Americans, Chinese watch Russians, Democrats watch Republicans, Republicans watch Democrats, girls watch boys, boys watch girls, and so it goes. My hunch is, you have even stolen a glance at the person sitting next to you during the past few minutes.

Students of human behavior number, therefore, in the billions. The family of "behaviorists" includes Euripedes as well as B. F. Skinner; Socrates as well as Jerome Bruner; Dostoevski as well as Karl Rogers. I think the main differences between us are not in the nature of quality of rigor of our observations but in the way we structure them and report them. To make my point as clear as I can, let me say that I believe I've learned as much about human behavior and culture by reading the poetry of Robert Frost as I have from reading the research papers published by my colleagues in journals of psychology, anthropology and education. And it seems to me that Dostoevski's *Notes From the Underground* is a splendid study and report of human behavior which, while instructive, is at the same time readable and enjoyable, a fine piece of inquiry and literature in one, a work of art. (It is curious to me why B. F. Skinner recently remarked in an exchange with Stephen Spender that in the utopia he would lead us toward art and culture as we have known it in the past thousands of years would not exist but, he went on to say, he would prefer to live in a world in which nobody would know what was bothering Dostoevski. Those of you who have read Dostoevski recently may judge from Mr. Skinner's remark which of the two students of the human condition is less than perceptive.)

With that preamble, let me try to get into the matters I want to talk about tonight. I want to talk a little about three remarkable men who, while separated by time and space and culture and race and religion, shared a common wisdom and whose tenure here on earth was all too brief. One of the three is Martin Buber, a Hassidic Rabbi; another is William James, an American Psychologist and medical doctor. The third is a dusty cowboy from the Oklahoma plains, Will Rogers. For the next few minutes I want to mine the wisdom from these three now silent men and apply it to the concerns of this symposium.

First William James since he has been silent the longest. Not long before he died, William James was vacationing in the Carolina mountains, weary, I suspect, of observing the behavior of his academic colleagues at Harvard, which, I'm sure you know, does become a little depressing after awhile. But consistent with a point I tried to make earlier, James was forever a student of human behavior whether at Harvard or in the mountains of Carolina. He was being driven along a mountain road in an open carriage where he saw coves, heads of valleys, or "hollers" as they are called in Kentucky, in which mountain men had cleared small acreages and had settled into mountain culture with their families and dogs and I suspect, a generous supply of mountain dew. As James reports it:

> The impression on my mind was one of unmitigated squalor, the settler had in every case cut down the more manageable trees, and left their charred stumps standing. The larger trees he had girdled and killed, in order that their foliage should not cast a shade. He had then built a log cabin, plastering its chinks with clay, and had set up a tall zigzag rail fence around the scene of his havoc, to keep the pigs and cattle out. Finally, he had irregularly planted the intervals between the stumps and trees with Indian corn, which grew among the chips; and there he dwelt with his wife and babes — an ax, a gun, a few utensils, and some pigs and chickens feeding in the woods, being the sum total of his possessions.
>
> The forest had been destroyed; and what had 'improved' it out of existence was hideous, a sort of ulcer, without a single element of artificial grace to make up for the loss of nature's beauty. Ugly, indeed, seemed the life

> of the squatter, scudding, as the sailors say, under bare poles, beginning again away back where our first ancestors started, and by hardly a single item the better off for all the achievements of the intervening generations.
>
> Then I said to the mountaineer who was driving me, "What sort of people are they who have to make these new clearings?" "All of us," he replied. "Why, we ain't happy here, unless we are getting one of these coves under cultivation." I instantly felt that I had been losing the whole inward significance of the situation. Because to me the clearings spoke of naught but denudation, I thought that to those whose sturdy arms and obedient axes had made them they could tell no other story. But, when *they* looked on the hideous stumps, what *they* thought of was personal victory. The chips, the girdled trees, and the vile split rails spoke of honest sweat, persistent toil and final reward. The cabin was a warrant of safety for self and wife and babes. In short, the clearing, which to me was a mere ugly picture on the retina, was to them a symbol redolent with moral memories and sang a very paean of duty, struggle, and success.
>
> I had been as blind to the peculiar ideality of their conditions as they certainly would also have been to the ideality of mine, had they had a peep at my strange indoor academic ways of life at Cambridge.

In the language of the Zen masters, James had experienced a Satori, a heightened sense of awareness. After he returned to Harvard he wrote about his Satori calling his extended "koan," *On a Certain Blindness in Human Beings.* He thought of it as his most significant insight and his most significant essay.

Later he was to say of it, "I wish I were able to make *On a Certain Blindness in Human Beings* more impressive. It is more than the mere piece of sentimentalism it may seem to some readers. It connects itself with a definite view of the world and of our relations to the same. Those who have done me the honor of reading of volume of philosophic essays will recognize that I mean the pluralistic or individualistic philosophy. According to that philosophy the truth is too great for any one mind, even though that mind be dubbed the absolute, to know the whole of it. The facts and worths of life need many cognizers to take them in. There is no point of view absolutely public and universal . . . The practical consequences of such a philosophy is the well-known democratic respect for the sacredness of individuality." James had become aware of profound differences in cultural and subcultural factors in perception, cognition, and emotion. Unfortunately, however, his splendid essay has done little to overcome our individual and collective blindness. Our blindness persists and that is why I bring it up again tonight, although I assuredly do not expect to accomplish something which James failed to accomplish. I only wish I could.

The point James is making is, of course, as obvious as the sun, but obscured perhaps by its blinding immediacy and intimacy, obscured by some inscrutable aspect of the human condition. The principle imbedded in his satori is simply this: White there is one "world," one "reality," one "objective order of things," there are billions of separate and private perceivers of that one "reality," billions of separate and private responses to that "reality," all bearing names like George and Joseph, Teresa and John.

While the culture into which we are born and within which we are conditioned and through which we get our "consensus reality" is a major factor in the blindness which afflicts us, there is yet another and more baffling factor involved, which too is as obvious as the sun, and doubly perfidious in human affairs at a stratum of being deeper still. It is this second factor which James approaches in his essay and with which Martin Buber grappled all his life. It is the blindness which cultural conditioning and cultural lenses do not fully explain. It is the blindness which causes us to assume that those of the same culture, of the same family, of the same household will necessarily perceive, interpret and respond to "reality" similarly. Let me try to get my point in focus by sharing with you a personal awareness which has been growing in me over the years.

My brother and I are as emotionally close as brothers can be. We were orphaned at an early age and that orphanage probably welded our fraternal relations into an unusually strong bond. Over the years we have gone our separate ways, revitalizing the bond by letter, by phone, and by periodic reunions at his home or mine. At these reunions over the years I have come to see how profoundly our worlds, our "realities," differ. Let me explain that a little. While we are of the same genetic stock, of the same general nurture, of approximately the same age, of the same sex, welded in camaraderie by the strongest of all bonds, we are, often in the deepest sense possible, utter strangers, however friendly.

My brother is a heavy equipment operator in Oregon. In childhood his love for tools and machines and the sound of internal combustion engines was manifest. At six or seven he had developed his own simulated, scale model construction company complete with backhoes, booms, tractors, graders and all the other pieces of equipment which are necessary in the removal of mountains, the maintenance of roads and the building of dams and dikes and bomb shelters.

My brother loved these monstrous pieces of equipment. In his youth, while I was reading books or hunting or working with my animals, my brother was building scale model bridges, moving yards of sand and gravel, filling his environment with the dust and devastation of destruction. His childish interest in machinery grew with the years directing and controlling his middle school, high school and college curricular options, directing and controlling his ancillary and tangetial interests and hobbies, directing and controlling his elemental mind set, his language patterns, his approach to problems, his modes of analysis, his choice of metaphors, in short, his total personality and life style. Today he is a pre-eminently successful (and arrogant) member of the construction world, a world in which I am almost totally blind. My brother is deeply, even passionately involved in his world and when I visit him I expect to be taken around to the tangible parts of that world as he attempts to share the intangible parts of it with me. He is especially proud of his giant earth mover manufactured by the Euclid Company, a colossus of a machine with monstrous deisel engines at either end of it, a great sperm whale done in steel with wide open mouths at either end. A narrow steel ladder permits my brother to mount this frightening contraption and seat himself high above it all where he sits with the magesty and dignity of a king on a throne and with deft and refined movements, he directs a fifty ton hunk of smoking steel to do his bidding. The expression on his face as he orchestrates this symphony of combustion and bolts gives glory to God. It is an important expression; I have seen it on other faces at other times in other places. It is the expression of confidence and well-being. I have seen the expression on the face of the conductor as the violins and cellos of the symphony accomplish a difficult passage in Wagner; I've seen the expression on the face of a mother when the evening meal turned out well; I've seen the expression on the face of a research assistant when an experiment moved him a step closer to a proof; I've seen the expression on the face of a farmer when the loft is full of hay and the cattle are fat for winter; I've seen the expression on the faces of hobo's as they catch the evening freight out of Chicago and settle into the box car and bundle up against the cold with a quart of dark red wine; and I've seen the expression on the faces of kids over and over again when they have, at last, mastered a subject or a part of a subject or solved a problem and somebody said to them, "terrific!"

The point I'm trying to make is that the "real world" is many. What we abstract from or select out of the sensory phantasmagoria which sweeps around us is *our* "real world" (private, unique, singular) and we all abstract from and select out at a different pace, from a different perspective, with different tools and from different genetic and cultural endowments. We attach significance and meaning to different dimensions of the phantasmagoria and are perplexed when our neighbors seem blind to what is, to us, so obvious.

Three of four years ago I was embroiled in a nasty exchange over this matter with a gentleman on the East Coast, who had argued vigorously against expanding our school curricula to include the poetry and drama and literature and music of our historic minority cultures. His argument was that such courses "aren't worth a dime in the real world." Since I had argued publicly for such courses I was asked to state my arguments and an international journal was to feature the debate in its end of decade edition. I tried to make the point in that exchange that I am trying to make tonight. The "real world" of Johnny Old Cayote of the North Cheyennes at Lame Deer is fundamentally different from the "real world" of Jose Martinez of the Barrio in El Paso or the "real world" of Sally Jones of Mount Lake Terrace, Washington or the "real world" of Susie Q of Webster Grove, Missouri. After 25 years working with this issue in flesh and blood, I am persuaded that our simple blindness to this elemental truth accounts for some of our pathetic failures in and around our schools these past dozen decades. The blindness James laments in his essay plagues us today. Let me give you two vignettes from my file which are close at hand and may illuminate my point. The Quinnault Indian Reservation is approximately 100 miles from this campus as a crow flies. The kids of the reservation go to school in an all-Indian elementary school in the fishing village of Taholah on the south end of the reservation. By the time they enter school at about age 5, the culture of the Quinnaults has already programmed them for a primary culture shock their first day at school. The diet of the tribe consists almost entirely of fish and fish by-products. A Quinnault child is habituated, conditioned early to the smells and tastes and sights of a fish culture. His taste buds tingle and he salivates to the odors which would make his Indo-European neighbors ask for ventilation. The things we eat are base-line elements of a culture. The cooks at the elementary school assure us that Quinnault children may take up to six years to accommodate and master the odors and tastes of foods other than their own, foods, of course, which we all know to be the foods of the "real world," steak, eggs, bacon, boiled vegetables, etc. The rejection of the food is not merely psychological; it takes a passionate visceral form; Quinnault children, if forced to eat the most rudimentary and delicious foods of the "real world" like spaghetti, macaroni, frankfurters and kraut, will simply vomit. This is, of course, a very simple example of cultural conditioning. But imagine, for a moment, the difficulties inherent in a half dozen more subtle factors in the life of a child and his culture, including the most important factor of all, the language with which a child structures and communicates his world and the world of his people.

Although I am sure it will strike you as incredible, in a number of school districts in this nation the language of our minorities is officially forbidden in the classroom or on the school ground. The primary language of half the people of El Paso, Texas is Spanish, yet until recently, no accommodation was made of this fact in the public schools of El Paso; a child caught speaking his native language in or around the school was disciplined. If he persisted, he was discharged. As you might guess, the school attrition rate among Spanish-speaking children in El Paso was as high as 75% in 1960. For years, the explanation advanced for the attrition was simply "Spanish speaking youngsters just aren't very academic." That, of course, was not true. Blindness on the part of the schools to the "real world" of Jose Martinez and the way in which that "real world" is structured, codified and communicated was the explanation. Here and there, grudgingly, and without any real understanding of what is involved, some school districts have at last toyed with programs and policies of accommodation. My friend Sal Castro, working with the problem in the public schools of Los Angeles argues that *all* children would be well served if they were multi-lingual; hence he has proposed that at least in districts in which there are significant numbers of youngsters whose primary language is Spanish – or what have you – that all children in such districts be provided both language systems from kindergarten on.

(The Soviet Union adopted this policy in 1918; a child of one Republic will learn his primary language in school – Uzbek, Kazakh, Buriat Mongolian – plus Russian, and frequently a third language. Hence, fifty-six years later, nearly all Soviet citizens are bi- or multi-lingual. My hunch is, much of the cohesiveness of the Soviet system is rooted here in the early understanding of the significance of cultural diversity and the unhappy consequences of ignoring or punishing it.)

I am not suggesting that we are dead in the water unless or until we all know everybody else's language and culture. But we may be dead in the water in terms of effectiveness in working with culturally different youngsters and until we see clearly the significance of cultural diversity and cultural pluralism, and unless and until we see clearly that the Anglo-Saxon English speaking world is only one of many worlds and perhaps, alas, not the best one at that. It is the world into which I was born and I am not ashamed of it nor do I feel guilty about it, but I have seen enough of other worlds, other "realities," to know that they are beautiful too, and that if we could shake the blindness James lost in his satori in the Carolina mountains, we might all be infinitely richer – and more humane – and certainly more effective in our schools.

Now I want to recall Martin Buber, that grand old man who lived on Love of Zion Street in Jerusalem, kept goats, and while others were doing very important things, tried to remain calm and human and talk sense about the human condition. It was Martin Buber, after he had lost his family in the German holocaust, who pled for the life of Adolph Eichmann. I mention this to alert you to how deep his commitments to his wisdom ran. He did not mouth principles only to suspend or violate them when his comforts were threatened.

Buber's major work was called *I & Thou*, or in German *Ich Unt Du*. The purpose of that book, indeed, the purpose of Buber's life, was to alert us to the mystery of being, the living, breathing, feeling, loving, sorrowing, suffering mystery which bears a name, like Joseph or Samuel or Peter or Elizabeth or Robert. In short, Buber tried, with no more success than William James, to help humanity with its blindness.

Generally, it seems to me after 44 years observing my own and my neighbor's behavior, that we are blind not only to most of what makes life significant to others, but we are often blind to the major points of significance and meaning in our own lives, all too often, we are frenzied, pushed, other-directed, shallow autonotoms, looking for distraction to fill in the hours of troubled, empty wakefulness.

My work over the past twelve years and the associations I've had may have distorted my view, but I have a strong impression that much of the nation's distress springs from the blindness which James and Buber tried to lift to the level of general consciousness. It is the national distress which David Peisman tried to focus for us 20 years ago in his perennial best seller *The Lonely Crowd.* It's the blindness Clark Moustakous writes quietly about in *Loneliness and Loneliness and Love.* It's the blindness Paul Tillich laments in one of his better essays entitled "The Lost Dimension: Depth."

During his ninety years here, Buber's rational but passionate commitment to the dimension of depth in human character and human relations grew – clearly evident in his famous exchange with Israel's Prime Minister in the Eichmann affair. Even Eichmann, mass murderer to whom Buber had lost his family, was, in Buber's mind, a human soul. Hence the plea for his life and that Eichmann be paroled to an Israeli Kabbutz where he might yet learn to be human, i.e., overcome his blindness.

Another incident which occurred within the past year and which becomes more significant daily: David Ben Gurrion, one of Buber's students, visited the fortifications along the Suez Canal five months ago. A young Israeli was showing the Prime Minister around boasting about the arsenal which had been developed there. The young Israeli pointed out a mighty undergound fortress and asked David Ben Gurrion to inspect the "bunker." Ben Gurrion turned to the young Israeli with much sadness, and asked: "Bunker? Bunker? What kind of a Hebrew word is that?"

I will not comment on that exchange except to say that Ben Gurrion may have advanced to the head of the class on that day. He is now writing his recollections on a Kabbutz in the Sinai, very much as Deitrich Bonoeffer sat writing his recollections in 1940, surrounded by a certain blindness in human beings that had turned to madness.

Now I would like to conclude my remarks by recalling a man who holds a unique place in American history. I became aware of this good man and the nation's unique response to him while I was stationed in the Capital. The major statuary of the country is located on the ground floor of the Capitol Building in a large room covering a quarter of an acre. The room contains life-size marble and granite likenesses of Presidents and other American notables, Ben Franklin, Tom Paine, Sam Adams and the likes. In the most conspicuous and elevated spot in the room, away from all the other notables, stands an eight foot bronze likeness of Will Rogers. The bronze has been rubbed soft and smooth over the years by the hands of millions of visitors. The Oklahoma cowboy stands there, alone, magestic, hair down on his forehead, baggy trousers, smiling benignly at the world around him. The bronze likeness of Will Rogers is the center piece, the magic of the room and anybody who enters there recognizes that right away. Unlike the other statues Will's likeness is strangely alive, smiling wryly and humbly, no affectations, no hautiness, no bullshit.

If I were looking for the grand exemplar of the best in humanity, I would not look beyond Will Rogers. It seems to me we saw in his short life a man who had overcome the blindness of our family and joyfully and whimsically and enthusiastically acted out his wisdom and captured the affections of the Nation. Indeed, the world. If William James and Martin Buber are the theorists, the philosophers, Will Rogers was the activist, the practitioner, the completed and universal man.

Let me conclude by recalling a couple of things about him. First, he is the one who said, and there is evidence that he believed it, "I've never met a man I didn't like."

It was Will Rogers who, wherever he went, from the palaces of Europe to a sharecropper's cabin in Alabama to the igloos of the Arctic, always entered his host's house with "You folks sure do have a nice place here." A quaint gambit? Perhaps, but I think not. I think those lines represent Will's wisdom, his remarkable openness and sensitivity to the mystery of being, to the mystery of other worlds in which he was a humble guest. Once, in a sharecropper's cabin, his host was a little abashed by the celebrity in his house. He offered Will a cup of coffee, or rather, a saucer of coffee with, "Mr. Rogers, here's your coffee, already saucered and blowed." Will allowed as how the gesture struck him as right neighborly. He drank the coffee with relish.

In the national gloom of the past few years, now darkening into night, it is good to recall Will Rogers. But as schoolmen, it seems to me we should recall him frequently, even daily, as we work with youngsters. How much more successful we might be, and richer and happier, if we could approach all our neighbors, especially our student neighbors, with "You folks sure do have a nice place here" and understand what we are saying.

"Cultural Tolerance, Learning and Education"

Another Point of View — Comments on Professor Billings paper

by Peter J. Elich

For the past four years the Western Symposium on Learning has brought together some of the continent's most distinguished psychologists to describe their research and to share their points of view on major topics of human learning. This year the pattern of the symposium was slightly changed to include the participation of an educator and outstanding teacher who has gained national recognition as a leader in the development of educational programs for culturally different youth. Dr. Billings was an originator of the Upward Bound programs in the Pacific Northwest and later National Director of the same program. He has been instrumental in helping different cultural groups in America develop educational programs which maintain their cultural integrity while providing access to the benefits of higher education. His extensive experience with cultural variation as it relates to education, combined with his life-long dedication as a teacher to helping others become more sensitive to the uniqueness of the human experience, makes Dr. Billings well qualified to present another point of view from that of the behavioral scientist on the topic of this year's symposium.

Dr. Billings reminds us that the study of human behavior has been one of man's most persistent activities and has by no means been limited to the efforts of the behavioral scientist. The contributions of many different disciplines and many different points of view have combined to provide us with the level of understanding we presently possess and subsequent advances in knowledge will also come from many different avenues of inquiry. It is convenient, although sometimes misleading, to group students of human behavior into two general categories – behavioral scientists and humanists. Although such over simplified categorization does not adequately fit the unique contributions of many individuals, it nonetheless may be worthwhile to look at some of the major characteristics of these two general points of view with regard to their potential strengths as well as their limitations.

The behaviorial sciences have contributed a great deal to our understanding of human behavior and the rate of progress is accelerating. All questions about man, however, do not lend themselves to direct inquiry by the methods of science and must therefore be left to investigation by other approaches. Psychology as a science limits its investigation to those phenomena which ultimately can be subjected to some kind of emprical determination – a self-imposed limitation which rules out the direct study of many questions of human nature of most fundamental importance. While the boundries of scientific inquiry are limited by the strict constraints of the scientific method, the knowledge acquired by this approach has a degree of certainty not attainable by other medhods of inquiry. Because scientific knowledge must be objectively derived, its methods and findings are open to public scrutiny and verifiable by replication. There is no such thing as a subjective science. Science, by its very nature deals in the realm of objectivity. This objectivity and the demand for verification keep scientific psychology from going to extremes in the generalizations it makes about human behavior. The limitation of the behavioral sciences is in the dimensions of human existence which it can study, while its strength is in the degree of certainty it can impose upon its knowledge.

The humanist's ways of seeking understanding of man can explore free from all but the loosest constraints and can provide subjective interpretations of the most subtle dimensions of human existence. The intuitive efforts of the novelist, poet, playright and biographer can provide valid and deeply penetrating knowledge of man, often going to the heart of matters that fall outside of the realm of science. The boundaries of intuitive exploration are limitless and the results of these efforts need not conform to any stringent criteria. However such efforts must always be viewed as the more or less perceptive interpretation of the human experience as viewed through one person's lenses. Subjective interpretations of sensitive observers can add greatly to the perception of others, but they can not be subjected to objective analysis and verification and must therefore be viewed with a lesser degree of certainty than scientific knowledge.

In an invited address to the 81st Convention of the American Psychological Association, Donald Hebb provides an insightful analysis of the scientific and humanistic approaches to the understanding of man. Commenting on the contributions of humanistic inquiry and its differences from science, he says, "It is to the literary world, not to psychological science, that you go to learn how to live with people, how to make love, how not to make enemies; to find out what grief does to people, or the stoicism that is possible in endurance of pain, or how if you're lucky you may die with dignity; to see how corrosive the effects of jealousy can be, or how power corrupts or does not corrupt. For such knowledge and such understanding of the human species, don't look in my *Textbook of Psychology* (or anyone else's) try Lear and Othello and Hamlet. As a supplement to William James, read Henry Jeames – and Jane Austen, and Mark Twain. These people are telling us things that are not on science's program. Trying to make over science to be simultaneously scientific and humanistic (in the true sense of that word) falls between two stools. Science is the servant of humanism, not part of it. "Combining the two ruins both."

The two fraternities are distinct in the kinds of contributions they can make to our understanding of the human experience. Each provides knowledge of unique value and the contributions of one are essential to the development of the other. Where the richness of the humanist's perceptions gives rise to hypotheses to be tested by the scientist, the discoveries of science provide further stimulation for humanistic inquiry. Dr. Billings is encouraging us not only to look to the humanist as well as to the scientist for our knowledge about human behavior, but also be alert to the many forms of humanistic insight. He has chosen to describe the clear approach of a philosopher-scientist, the profound perceptions of a Jewish existentialist theologian, and the pithy humor of a cowboy humorist to illustrate his point, but could as well have chosen many others well known to all of us.

It is good that conferences of behavioral scientists include humanistic perspectives on matters of common concern. Professor Billings, by describing his own perceptions and those of James, Buber and Will Rogers, has added a dimension of richness to our understanding of the cultural factors that affect learning and education which is different from that provided by the more constrained reports of research of his scientific colleagues. All of the factors that give rise to our understanding of other people and of our behavior toward them are not likely ever to be known. No single line of inquiry is sufficient to provide us with answers to the fundamental questions of human nature. No evidence is so clear or answers so convincing that we can afford to be blind to another point of view.

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Cultural Impact on School Achievement

I plan to speak to you today of a cross-national study of reading achievement. This survey is one part of a current cycle of cross-national studies of educational attainments that have been carried out by a group that calls itself the International Association for the Evaluation of Educational Achievement. The enterprise started informally some fifteen years ago as a group of persons in a dozen or so countries who were interested in educational research and who undertook to band together to study their common problems.

The first outcome of this association of individuals was a little pilot study, the results of which were published in 1962 with the title *Educational Achievements of Thirteen-Year-Olds in Twelve Countries,* that represented a demonstration that educational researchers in different countries could come together, agree upon a plan for a cross-national survey, develop mutually acceptable tests for use in it and then carry through the data collection and analysis. The first little study was a very modest one in terms both of the test development that was involved and of the sampling procedures. Having carried out this initial exploratory enterprise, the members of the group then embarked upon a more thorough and formal study of mathematics achievement, reported in 1967 as *International Study of Achievement in Mathematics* in which they made a more systematic and complete attempt to define the common objectives of mathematics achievement, to develop internationally acceptable tests, to carry out representative sampling of schools and pupils in each participating country, and to analyze the results in such a way as to bring out the consistencies and common trends in factors relating to mathematics achievement.

The third cycle of our enterprise has involved a half a dozen subject areas, reading comprehension being one of these, and since my responsibility has been primarily in the part of the study concerned with reading comprehension, I shall limit myself largely to that study as I report some of the results to you at this time.

One can reasonably ask why investigators should want to carry out cross-national surveys of educational achievement in the first place. What is the point of it, and what does one expect to gain? I expect the answers are much the same in relation to educational patterns or any of the manifold fields in which psychology concerns itself with cross-cultural studies. On the one hand, one thinks of the different national groups as replications, and seeks to find out to what extent results that have been identified in one particular national setting are general and identifiable across national groups and to what extent they are idiocyncratic to one of a few cultural settings. A good example of that in our data is the material on sex differences in achievement in the three fields of science, literature and reading comprehension. We in the United States would tend to expect girls to do better in reading and in literature and boys to do better in science. Are these relatively universal phenomena, or do they reflect something specific to the American culture?

Within the limits of the results from our studies, it is now possible to say that the differences in science and in literature are universal through all the countries that we have studied, but that the differences in reading comprehension are relatively small and are sometimes reversed. Though we see sex differences in achievement in science as being universal and pervasive, this does not, of course, prove that they are bilogically determined. It may very well mean that the impact of culture in the range of coutnries that we were able to study is uniformly one that emphasizes science as a field appropriate for little boys and encourages them to express that interest through their reading and studies so that they become generally more competent performers on science tests than the girls do. However the context is a very general one, and we then have to ask what it is that is so prevalent in all the national cultures that boys always tend to become the ones with science competency. By contrast, the small and inconsistent results with respect to reading comprehension, when the reading materials cover a range and variety of subject matters, suggests that the traditional finding in the United States that girls are better readers than boys may not be a very general or important differential and that it probably does represent something in the culture pattern in our society that encourages little girls to develop their verbal and reading competencies to a somewhat greater extent than little boys do.

As another illustration, consider what E. P. Snow, the English writer, has called the "Two Culture" phenomenon. Snow sees scientists and humanists drawing farther and farther apart into two isolated groups, each unable to understand what the other is talking about. To what extent are the schools fostering such a phenomenon, and how general is it? Some evidence on this point is provided by our data on achievement in science and in literature. Do students who perform well on tests in the one field tend to perform poorly in the other? Do schools that show good achievement in science show poor achievement in literature, and vice versa? It turns out that in England this is in fact the case. For students the correlation between scores on the science and literature tests is essentially zero, and for school averages it is -2.20. English students and especially schools, go off in different directions, and where one is good in one direction there is no tendency to be good in the other. On his home ground, Mr. Snow seems to have something – and the same pattern emerges in New Zealand. But it is not true in other countries. Elsewhere, both for students and schools the correlations are uniformly positive. Thus, there are indications that Mr. Snow's hypothesis was generated and is supported by patterns of intensive and early specialization peculiar to, or most extreme in the English educational system, and is a cultural phenomenon of limited scope.

Analyses of the type just illustrated concern themselves with relationahips that may be studied in each country, and ask about the consistency of those relationships from country to country. Another way in which cross-national studies can be valuable is to exploit the differences between countries. In certain significant respects, there are variations between countries that scarcely exist within a single country, and these variations represent a kind of "natural experiment." By way of illustration, countries differ in the age in which they start children in formal schooling, and it is possible to inquire whether the age of starting formal schooling is consistently related to aspects of achievement later on.

For what it is worth, Sweden and Finland, which start formal schooling at age 7 ranked first and third among 15 countries in reading score at age 10, while England and Scotland, which start school at age 5 ranked fourth and fifth. The United States, starting at age 6, ranked ninth.

Unfortunately, of course, countries differ in a great many respects. For this reason, the so-called "natural experiment" that is provided by the country that starts schooling at five in comparison with another country that starts schooling at seven is a very muddy one, and you see that the results are not very persuasive. On the one hand, the number of observations (that is, countries) is small. On the other hand, the number of conceivably relevant variables that differentiate country A from country B is very large indeed. For this reason, interpretations of between-country differences become very shaky and can never be more than suggestive. However, it is true that contrasts are available to be looked at when one has several countries that differ in systematic ways in their educational practices that are hard to examine within a single country when a particular practice is quite uniform.

Obviously, cross-national studies involve a host of methodological problems – problems of defining common objectives, of finding common concepts and terminology, of translation, of sampling, of communication and logistics. I could easily spend the period elaborating upon these matters with you and giving you the gory details of some of our snafus. But I won't. I will merely say that we encountered most of the range of problems that other cross-cultural investigators have encountered, we wrestled with them with varied degrees of success and we came through somewhat bloody and only slightly bowed. Some of the problems will come up for comment as I try to evaluate the results which I will now report to you.

We analyzed our data by person, by school and by country. Let me first talk about some of the country-by-country results. Though we have tried to play down the "Educational Olympics" aspect of our results, there is always interest in how one's own country has performed in relation to the set of participating countries. In reading comprehension, the United States was one tenth of a standard deviation below the general average at age 10, two tenths of a standard deviation above average at age 14, and five tenths of a standard deviation below average by the end of secondary school. Thus, at the earlier levels the U.S. is quite close to the general level of performance in the 15 countries studied. At the end of secondary education it lags behind, but it must be remembered that the proportion of the age group remaining through high school is much greater in the U.S. than in any of the other countries. Thus, the lower achievement in the U.S. can be largely accounted for by this factor alone. At this level, the spread of scores is substantially greater in the U.S. than in any other country. We have as good readers as any of the countries, but we retain in school a larger proportion of the poor readers.

The most dramatic between-country differences in reading comprehension score were the differences between the three "developing" countries included in the study and the other twelve economically (and educationally) developed countries. This difference is extremely large. If one considers the test given to 14-year-olds, one finds that perhaps one student in a hundred in India and Iran, one in five in Chile, scores as well as the average student in the U.S. or a European country. On a 52-item test the average student in India got a score of 5 after correcting for guessing, and the corresponding averages were 8 in Iran and 14 in Chile. (This compares with an average score of 26 in the developed countries.) In these three countries from a fourth to a half of the 14-year-olds continuing in school chose the wrong answer to a test item such as the following:

> Peter has a little dog. The dog is black with a white spot on his back and one white leg. The color of Peter's dog is mostly
>
> black brown gray

Persons who have worked in the developing countries have been quite conscious of the severe literacy problem the schools in those countries face. Our results serve to document and quantify this problem. They also give us some help in understanding it. In almost all of the factors that are associated with *individual* success in reading within a country such as the U.S. the developing countries show a deficit. For example, In India 60% report a father and 80% a mother with less than 5 years of schooling, as compared with less than 5% in each case in the U.S. Homes with less than 10 books are reported for 60% of the Indian students as compared with 8% in the U.S., while 70% report no daily paper (U.S., 12%) and 45% no magazines (U.S., 10%). Less than 20% reported listening to radio or watching TV, compared with 80% in the U.S. And the true differences are probably greater, because one of the severe limitations of our demographic data is that they are based on student questionnaire responses – questionnaires completed by students whose literacy level in India may frequently have been too low to permit them to read and understand the questions. A certain amount of random responding may have blurred the picture. It may be noted in passing that children in those developing countries did comparably poorly in the tests in science and literature.

Let us turn our attention from national averages to individual scores, and inquire what sorts of facts seem to identify the individual who reads well. What is there in his background, in his schooling, or in his present characteristics that serves to mark him off? Since the study was carried out by educators, a major focus of interest, of course, was in identifying features of schooling that could account for a greater degree of academic success.

We *were* able to identify a number of out-of-school factors that were predictive of reading achievement. These included conventional socio-economic indicators such as father's occupation and parental education; they also included cultural aspects of the home such as books, magazines, newspapers and a dictionary. Correlations for individuals were not imposing, but they were consistent throughout the developed countries. A composite of these home factors typically correlated about .40 with reading scores in these countries. Highest correlation was .54 in Israel for both 10-year-old and 14-year-olds, reflecting the wide diversity of cultures and backgrounds in that country. The composite correlated .42 and .51 in the United States for 10-year-olds and 14-year-olds.

It is interesting to note that these home background factors gave a relatively poor prediction of achievement in the developing countries. It is not entirely clear at this point whether the low relationship is merely a result of inaccurate questionnaire responses resulting from poor reading ability, or whether demographic variables that have a long history as predictors of ability and achievement in developed western countries no longer maintain the same significance in a developing country from some other part of the world. Occupational and educational level may mean one thing in a country that has had several centuries of continuity in industrial and educational development and something rather different in a country that is just moving into industrialization and universal education. The background variables that correlate only modestly with individual achievement may correlate much more markedly with average performance for a school taken as a whole. Thus, for 10-year-olds in the U.S. we have:

	Individual	School Average
Father's occupation	.26	.75
No. of books in home	.20	.62
No. of siblings	-.12	-.42
Newspaper in home	.26	.45

Results such as this indicate that achievement in a school is determined to a very substantial degree by the character of the student input to the school. Any evaluation of school factors in relation to achievement, or of a school as a functioning organization, must take into account these input factors. And with the variance so strongly determined by the quality of student input, we should expect only modest relationships between characteristics of the school or of schooling and the outcomes in student performance. This is not to say that schooling is unimportant or that children don't learn much in school. It is to suggest that *differences* in schooling between one school and another aren't likely to make a big difference – perhaps because schools themselves are not that different in quality.

Be that as it may, we tried as best we could through survey and questionnaire procedures to find out about the schools that our students attended. Some information was provided in the student questionnaire, some in questionnaires filled out by a sample of teachers, and some in a questionnaire completed by an administrative officer of the school. As in the case of individual factors, we were interested in consistent relationships observed in a number of countries. We tried to identify and get information on factors of school resources, teacher training and teaching procedures that might be expected to be realted to student outcomes. In my remarks I will concentrate on the 10-year-olds, because it is at this level that the schools are most directly concerned with instruction in reading, and the student is closest to his basic literacy training. Let me comment on a few selected variables to give you something of the flavor of the results, and then try to summarize and interpret our findings.

It has long been argued that teachers will do a better job in a smaller class because they can pay more attention to the individual, adapting instruction to his needs and characteristics. We tried to get information on class size and on various types of practices for individualizing work. Over the 14 countries, correlation with student/teacher ratio ranged from +0.32 to -.29 with a median value of -0.02.

The correlation was positive in 6 countries and nagative in 8. Correlation with use of within-class grouping for instruction ranged from +.021 to -0.31, with 5 countries showing positive correlations and 6 negative. The average correlation was exactly zero. Achievement was correlated with teacher-reported frequency of giving *individual* instruction in reading. Correlations ranged from +0.10 to -0.21, with 5 countries showing positive and 8 negative. The median correlation was -0.04.

Turning to training of teachers, we looked at average number of years of college and university training. Correlations ranged from +0.19 to -0.35, with an average value of -0.05. How about the availability of reading specialists? Correlations go from +0.16 to -0.18, with an average of -0.01, and are positive in 5 countries, negative in 7. What about school librarians? Values extend from +0.23 to 0.13, positive in 7 countries and negative in 5. The nearest thing to a consistent finding is the correlation with size of classroom library. Here, there are 9 positive correlations to only 4 negative ones, and the median correlation was +0.16.

Summarizing our data on school variables, the relationships of these indices to reading achievement were typically small, erratic from country to country, and useless so far as predicting average performance in the school is concerned. Of course, it is possible that the variations from country to country represent genuine differences in the significance of an indicator in different countries. Reading specialists may genuinely be an asset in Israel but a liability in the United States, though it is difficult to see why this should be so. However, the number of schools in single national samples is too small to justify confidence in the differences from one country to another. With only a hundred or so schools per country, small differences are hardly to be interpreted. The more defensible conclusion would appear to be that we have failed to find school factors that make a difference. What shall we make of this result?

There are, it seems to me, several explanations that, taken singly or in combination, can account for such a finding, and they suggest various lines of further inquiry. One possibility is that we were too late, that even by the age of 10 reading competencies are so well established that what the school is doing at that point can make but little difference. This suggests that one should study schooling during the first two or three years if one is to identify the school factors that make a difference in reading competence. A second possibility is that the effects of schooling are gradually accumulative, so that one needs to get information about the schooling to which students have been exposed over a period of years if significant influences are to be identified. This would suggest a longitudinal study. A third possibility is that we may have missed the relevant factors, either because we were not very shrewd in our choice of questions or because the relevant evidence about schools and schooling cannot be gathered by questionnaire techniques. If this last is the case, it suggests that any further studies may need to supplement questionnaire techniques with more direct observation and evaluation of what goes on in the classroom if significant school differences are to be identified. All of these modifications are incorporated in a proposal that is presently being considered for a cross-national longitudinal study of primary reading from school entry to about the age of nine years.

But it is still possible, and perhaps fairly probable, that the differences between schools are fairly minor compared with the differences that exist in home circumstances and in individual talent. If this be true, variations in schooling within a single national culture will at the most account for a modest amount of variation in reading achievement, and much of the variation will stem from sources over which the schools have no control.

We have considered out-of-school and in-school *predictors* of reading achievement in different countries. It is also of some interest to inquire about the *concomitants* of reading achievement. What aspects of his current behavior and his future plans distinguish the better from the poorer reader? For one thing, he reads more and watches TV or goes to the movies less. But what does he read? Students were asked to report whether they frequently, only occasionally or never read books and magazines dealing with each of 17 categories of content. A number of categories were more frequently reported by the better readers but the one that differentiated the better from the poorer reader most sharply for over 14-year-olds was "humor." This showed a positive correlation with reading achievement in every country. By the same token, tied for highest correlation in sections of the newspaper read was "comics." Other favorable indicators were adventure, history, science fiction and myths and legends for books and magazines, and the news and science articles for sections of the newspaper. Negative correlations appeared rather consistently for reading about sports or about love, and for reading the home-making section in the paper.

How consistent are over-all reading interest patterns from country to country? The 17 types of book and magazine materials and 9 sections of the paper were ranked for each country, and a ranking was also obtained for the average of all countries – which average was, of course, heavily loaded with Western, developed countries. For each country, its ranking was correlated with the pooled ranking. For 14-year-olds, the correlations were generally very high. Nine of the 15 countries showed correlations above 0.90 and two others approached 0.90. Apparently patterns of reading choice are very stable from country to country among the developed countries. With high consistency, for 14-year-olds, adventure, humor and mystery are at the top and politics and economics, philosophy and religion at the bottom. But in the Eastern developing countries of India and Iran the pattern is quite different, and their choices bear no relationship to those in the developed countries. India, for example, assigns first place to stories about school and second place to poetry, putting adventure and mystery in last place. Iran signs first place to myths and legends.

Much the same situation prevails with respect to sections of the newspaper. Consensus is high, except for India and Iran, and the most-read sections are uniformly the news and the comics, with comics in the lead for 14-year-olds and the news at the end of secondary school. Homemaking, books and music and art are reported as least read.

Again and again in our results we have seen the pattern of consistent results among the developed Western countries, and deviation from these results by the non-European developing countries. Unfortunately, our number of developing countries is small. Unfortunately also, the quality of our data from the developing countries tends to be suspect. Our studies need to be supplemented by more and better data from a wide range of non-European countries, data that are not easy to come by, given the limited resources of these countries both in funds and research personnel.

So where do we stand at the end of our endeavors in the field of reading? We have brought home the severity of the literacy problem in schools of the developing countries. We have gotten a picture of the generality of the importance of home background for the achievement of individuals and groups. We have confirmed on an international scale the difficulty of identifying by survey methods the features in a school or in schooling that contribute to superior reading competence in students. We have seen the good reader as a more voluminous, but not a more solemn reader of the fare that is set before him.

Culture, Family, Economics and Education

Comments on Robert Thorndike's paper

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Findings from research evaluating the cultural impact on education published over the past 15 years have been multifaceted. Attention has been paid to both the differences among those exposed and those responsible for the educational process, to the effects of the different approaches and the realtive differences in outcome, to sub-cultural differences with a given culture and to major differences among cultures. Results of this voluminous and provocative research have remained somewhat equivocal and in some situations actually contradictory. For this reason the contributions of the International Association for the Evaluation of Educational Achievement (I.E.A.) (Foshay, Thorndike, Hotat, Pidgeon, Walker, 1962) are of considerable interest.

Professor Thorndike's present paper details the most recent study of the I.E.A.: the evaluation of reading achievement across 15 national boundaries. Of significance was the evidence that the only difference in reading achievement which occurred among the 15 countries was the difference between those countries with a developing economy and those countries with a relatively stable economy and industrial development. For students within those countries whose economic circumstance and industrial development was markedly poorer, the "developing" countries, (e.g. Chile, India and Iran) reading achievement was considerably below that of students within the nations with more stable economies or the "developed" countries. Evaluation of achievement levels from one country to another among the "developed" countries (e.g. England, France, Germany etc.) indicated that the over all differences in reading achievement were not significant. The only inter-national differences found, then, were those between the "developing" and "developed" countries.

When attention was paid within the "developed" countries to variables which educators have considered important to the educational process, (i.e. class size, age at school entrance, teacher effectiveness, educational philosophies or methodologies) these variables appeared to have little relationship to differing levels of reading achievement. The most significant variable related to the intra-national differences in reading achievement of adolescents within a country characterized by a certain level of western cultural "sophistication" was family background. What was suggested from this finding was that given a "developed" cultural and economic level those young people who have the most favorable family background were the most able to profit from their educational experiences. Or, as others have stated when looking at achievement differences within our own national boundaries, schools don't make a difference but the family does (Mosteller and Moynihan, 1972).

Dr. Thorndike does note that the measures of cognitive understanding used to evaluate achievement levels were taken at a point in time when many of the young people who participated in the study might well have fixed their attitudes toward what they wished to get out of their educational experience. He suggests that a study of reading skills designed to measure the early educational experience – or even better a longitudinal study of achievement from school entrance through the primary grades – might provide even more illuminating information about cross-national educational approaches and their relationship to reading comprehension skills. These studies are, in fact, in the planning stage.

Some might wish to question the validity of Thorndike's conclusions noting that the findings are based on data obtained from relatively short tests. The instruments included a 45 item scale for 10 year olds, a 52 item scale for 14 year olds and a 54 item test for students at the end of the secondary school (Thorndike, 1973, pp. 23-24). In defense of the I.E.A. findings Dr. Thorndike does note in considerable detail the care involved in test construction, including elaborate attention to item analysis, to problems involved with subtle language differences, sampling difficulties, and the tremendous organizational difficulties associated with survey techniques across so many national boundaries (Thorndike, 1973, pp. 19-44). Moreover, rather than dwelling on criticisms it would seem more profitable at this point in time to look at the suggestions raised by the study and evaluate their heuristic value as they apply to our own educational systems. And, certainly one of the most provocative questions raised by the study is whether or not it is just family or whether schools do make a difference.

In the heyday of President Johnson's concept of a "Great Society" we were convinced that inequality in educational opportunity was one of the major injustices in American Society. As more federal funds were poured into programs for the "disadvantaged" some concern was raised about evaluation of effectiveness of these programs. James S. Coleman was commissioned, along with others, to look at our national educational scene (Coleman, 1966). His lengthy and detailed scientific study initially attracted only cursory attention and was heralded as clear cut evidence that more money did provide better schools. In the book, *Social Class, Race and Psychological Development,* (Deutsch, Katz, Jensen, 1968) the editors note that:

> "The scholastic achievement gap that separates pupils in the slums from those in affluent neighborhoods remains tragically large. This was shown in a recent national wide survey conducted by James Coleman and others for the United States Office of Education." (p.1)

As others read the "Coleman Report" more carefully there were different interpretations of the same data. Hodgson (1973) reports that Professor Seymor Martin Lipset of the Harvard government department commented to Daniel Patrick Moynihan, "Guess what Coleman found – schools make no difference, families make the difference (p. 35)." This initiated a series of seminars conducted by Professor Moynihan evaluating the Coleman report.

Christopher Jencks, Harvard sociologist, was quite willing to climb on the Moynihan bandwagon and argued that the only way to alter *Inequality* (Jencks, et al., 1972) was to change the whole society. In his reassessment of the effect of family and schooling in America as he interpreted the Coleman Report he concluded that Coleman and his associates had provided evidence that: 1) most Black and White Americans attend different schools, 2) despite popular impression to the contrary, the physical facilities, the formal curricula, and most measureable characteristics of teachers in black and white schools were quite similar, 3) despite popular impression to the contrary, measured differences in schools' physical facilities, formal curricula, and teacher characteristics had very little effect on either black or white students' performance on standardized tests, 4) the one school characteristic that showed a consistent relationship to test performance was the one characteristic to which poor black children were denied access: classmates from affluent homes. Jencks does acknowledge that Coleman reports that minority children when entering school have a serious educational deficiency for which the school is not responsible but that these minority children have an even greater deficiency at the end of school which is in part a result of the school experience. For Jencks, more money to schools just perpetuates the same inequalities of society in general. He does not see *education* as the vehicle for social change that many of us do, but instead argues for more equality in national income.

A possible alternative to what Jencks is saying is that "quality" education cannot be measured in dollars alone. Cumulative research does indicate that the advantaged child who enters our school system does profit more from his school experience than does the youngster who has had fewer comparable experiences related to achievement in schools with primarily middle class value systems. But evaluation of this relationship between "family" and "educational" environments – to say nothing of adequacy of test measures – has not been completely explored. In considering the achievement levels of "advantaged" and "disadvantaged" children – or the differenced in achievement in "developed" and "developing" countries – one concern needs to be the appropriateness of the educational system to the needs of the child. Within our own nation, how does the Black child reared in a central city area, the American Native child reared on his isolated Indian reservation, the Chicano who spends his summers in the fields and lives in migratory housing (Mason, 1974) adjust to the typical public school classroom? What educational innovations are necessary to make the educational experience more meaningful for children from minority and culturally different backgrounds?

One attempt with this goal in mind has been a program which has been in operation since the summer of 1966 on the campus of Western Washington State College (Mason, 1969a, 1969b). Project Catch-Up is a six-week, residence program of innovative educational experiences for junior high youth from American Indian, Chicano and Anglo ethnic backgrounds. The intent of the program has been to test whether experienced public school teachers from area representative schools can effect changes in expected high school dropout rate, in low school achievement, and in negative self-images. Follow-up evaluation of the over 300 students who have completed the program shows a reduction in school dropout rate, significant gains in reading and arithmetic skills and more positive views of self-worth (Mason and Locasso, 1972).

The measured changes in the Catch-Up participants' performances — as Thorndike's study would suggest — are in relation to the comparative position of the participants in relation to their "advantaged" status in our cultural value system. The Anglos have gained most from their summer experience and the Indians least (Mason and Locasso, 1972). In an attempt to compensate for the relative difference in "improved" performance as measured by standardized tests the focus of the program has been shifted somewhat from attention to the effects of public school teachers to an evaluation of the facilitating effects that undergraduate college students from similar ethnic backgrounds might make with the participants (Mason, 1973). These college students have proven to be able to cross cultural barriers and establish communication channels which hopefully will open up new patterns of learning for the adolescent participants.

But even with the demonstrated improved achievement levels and more positive attitudes of self-worth, Project Catch-Up participants remain considerably below their more economically advantaged peers. What about Jenck's assertion that no student who comes from poverty circumstances, whose day-to-day living situation is minimal, and whose family value systems are different from middle-class orthodoxy can achieve at a comparable level to the student who does not face these situations? Possibly the "family" "school" interaction *can* best be understood by including Jenck's (and Thorndike's) attention to the economic variable.

Despite the criticisms of Coleman (1966), Moynihan (1972), Jensen (1969) and others of compensatory and/or innovative educational programs, it can be demonstrated that achievement levels of students from poverty circumstances can be improved from expected low levels to significantly higher levels. However, the evidence that this improvement, in many situations, is not maintained over time may well be due to the lack of significance of this type of achievement for the family. The value system of a particular sub-culture is frequently different from the educational goals imposed upon it by the status-quo.

Thorndike (1973), and Jencks (1972) have provided evidence that educators are able to provide an adequate environment for learning when the student is receptive and prepared for the expectations made on him. For those students who are less able to profit from the usual classroom learning situation there is clear-cut evidence that the family influence is of extreme importance. Rather than continue to emphasize only what goes on in the classroom it would seem that a demonstration project designed to encourage a dialogue between educators and their particular community is in order. Such a dialogue would provide the opportunity for the educators to listen to the value systems of the community and for the community to help the educators understand the cultural background the child brings to the classroom. Involvement of family and communication between "school" and "community" is the next challenge for education.

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Kinship, Psychosocial Homeostasis (PSH) & Learning

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I.

For three years, 1968, 1969 and 1971, I performed a little experiment in three separate classes of mine. We all know the myth of the Primeval Flood, Noah and his Ark, the curse of Ham's descendants and the dispersal of all sons including Shem and Japheth from Mount Ararat. That is the Western version of it. At the beginning of these classes I asked my students to exercise their imagination and rewrite the story with entirely different plots. Two of these classes were at Northwestern University (1968 and 1971) and one at the University of Hawaii (1969). The 1971 class was on Cultures of China while the other two were on Psychological Anthropology. A total of 114 students responded.

None of their stories deviated from the Old Testament model, not even those by my University of Hawaii students, about one-third of whom was of Asian extraction.

For purposes of analysis my former student Frank Pasquale, now of the Department of Psychology at Western Washington State College, and I divided the Biblical myth into ten elements: (1) escape to new locale; (2) escape from flood alone, with family or with others; (3) dispersion of the family (or other survivors); (4) reason for the flood; (5) chosen man or few; (6) glory or thanks to God; (7) appearance of drunkenness, sex and violence; (8) curse against descendants; (9) taking animals; and (10) building the ark. The responses were first coded by Pasquale and then independently by Dr. Larry Fisher, a new graduate of anthropology at Northwestern University.

Not all the responses incorporate all ten elements. But practically all include the chosen man theme. In only a few of the responses do we find that others, such as other races of men, groups, families or individuals, have survived or have survived when Noah perishes. In none of the responses do we have anyone other than one Noah or Noah-like character who knows of the imminent disaster. There is no response in which whole groups of individuals or nations became aware of the coming of the flood and then managed to survive.

The theme of the flood as punishment is most prominent among the responses. More than half of them see the reason for it as man's wickedness. And an overwhelming majority of the responses see escape from the flood as the only solution to the problem.

The following four tables give us more interesting insights into the responses:

Table 1a.
Escape to New Locale

	Leave Homeland *	Leave And Return	Remain In Homeland	Unclear Or No Allusion	
1968 (Northwestern)	18 (60.0)	1 (3.3) **	6 (20.0)	5 (16.7)	30 (100.0)
1969 (Hawaii)	24 (53.3)	0	6 (13.3)	15 (33.3)	45 (100.0)
1971 (Northwestern)	35 (89.7)	0	1 (2.6)	3 (7.7)	39 (100.0)
	75 (65.8)	1 (0.9)	13 (11.4)	23 (20.2)	114 (100.0)

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* Of those who state that Noah should or does move from his homeland (n = 75), 17 (22.7%) explicitly assert that the move led to creation of "The Great Society," a new race of men, a new and/or better world, etc. In the 1968 N. U. sample 5 of the 18 (27.8%) are of this nature; in the 1969 Hawaii sample, 5 of the 24 (20.8%); in the 1971 N.U. sample, 7 of the 35 (20%).

** In this case, Noah and family embark on an ocean voyage. When they return, they learn that there never had been a flood.

Table 1b.
Reasons given by respondents
for remaining in homeland

		1968	1069	1971	TOTALS
a)	Noah disobeyed God, remained and perished.	2	2	0	4
b)	Reasonable to stay where he knows land.	0	1	0	1
c)	Easier than building an ark.	1	1	0	2
d)	Noah convinced God not to destroy mankind.	1	0	0	1
e)	Noah fools others into building wall for him.	0	0	1	1
f)	Noah and sons create airplane but can't fly.	0	1	0	1
g)	Noah considered crazy and all get drunk.	1	0	0	1
h)	No reason explicitly given.	1	1	0	2
		6	6	1	13

Table 2
Escape From Flood Alone, With Family, Or With Others

	With Family	With Family And Others *	Alone	No Mention Or Unclear ***	
1968 (Northwestern)	13 (43.3)	10 (33.3)	0	8 (26.7)	30 (100.0)
1969 (Hawaii)	27 (60.0)	8 (17.8) **	2 (4.4)	8 (17.7)	45 (100.0)
1971 (Northwestern)	33 (84.6)	2 (5.1)	2 (5.1)	2 (5.1)	39 (100.0)
	73 (64.0	20 (17.5)	4 (3.5)	18 (15.8)	114 (100.0)

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* "Others" were generally intelligent, humble, God fearing, repentent, or otherwise "good" men worthy of repopulating the earth. In three of the stories might others taken be considered for evil purposes (e.g., taking women other than his wife for Noah's pleasure during the long journey). In no case were any other kin than unclear family members and their children mentioned.

** In one case Noah chose to take only the best men and women, his family was left behind.

*** Included in this category are cases in which Noah and family remain at home to be destroyed. In the 1968 N.U. sample 5 of the 8 cases tabulated were of this nature; in the 1969 Hawaii sample, 2 of the 8; in the 1971 N.U. sample, none of this type was encountered.

Table 3a
Dispersion of Family (Or Other Survivors)

	Dispersion	Remain Together	Unclear	
1968 (Northwestern)	10 (33.3)	4 (13.3)	16 (53.3)	30 (100.0)
1969 (Hawaii)	9 (20.0)	1 (2.2)	35 (77.8)	45 (100.0)
1971 (Northwestern)	11 (28.2)	4 (10.2)	24 (61.6)	39 (100.0)
	30 (26.3)	9 (7.9)	75 (65.8)	114 (100.0)

Table 3b.
Breakdown of Reasons Given for Dispersion

Reasons Given by Respondees	1968	1969	1971	TOTALS
a) Implied in assertion of world-repopulation	6	4	3	13
b) Reason dictates it best to separate	0	4	1	5
c) Quarreling forces separation	1	0	2	3
d) Families become tired of each other	2	0	1	3
e) Noah sends children away in anger	1	0	2	3
f) Sons of Noah disperse out of shame or guilt for wicked deed	0	0	2	2
g) Each man for himself in survival	0	1	0	1
	10	9	11	30

Table 3c.
Breakdown of Reasons Given for Remaining Together

Reasons given by Respondents	1968	1969	1971	TOTALS
a) Noah disbelieves God and remains at home	2	1	0	3
b) Noah and family move but all perish.	0	0	1	1
c) Communal living safer or preferred.	1	0	2	3
d) Noah convinces God not to send flood.	1	0	0	1
e) Noah allows all men ("scum") to be destroyed (including himself).	0	0	1	1
	4	1	4	9

Table 4
Appearance of Drunkenness,
Sex, or Violence in Responses.*

	Drunkenness	Sex	Violence	No Mention
1968 (Northwestern) (n = 30)	4 (13.3)	4 (13.3)	5 (16.7)	16 (53.3)
1969 (Hawaii) (n = 45)	6 (13.3)	14 (31.1)	4 (8.9)	30 (66.7)
1971 (Northwestern) (n = 39)	1 (2.6)	10 (25.6)	11 (28.2)	22 (56.4)
TOTAL SAMPLES (n = 114)	11 (0.6)	28 (24.6)	20 (17.5)	68 (59.6)

* Tabulation of occurrences of each element is independent of the others. If more than one element (e.g., sex and violence) occurred in a given story a tally was made in both categories. Percentages given refer to proportion of occurrences per number of responses (n). They are independent and non-additive across categories for each sample. Hence, the total number of responses is larger than the total number of respondents.

Tables 1 and 2 are self evident. The results in Table III are somewhat weakened by the fact that three-fourths of the respondents have not addressed themselves to the matter of dispersion directly. However, of those who do, over three times as many conform to the Biblical version in which Noah's sons disperse as opposed to those who have the families remain together. In Table 4 we find nearly half of the responses involve drunkenness, sex and violence.

But the most interesting fact about the responses concerns what is omitted rather than included. Table 2 says that although 64% of the respondents have Hoah escape "with family," the family consists of his wife and children but not his parents or his wife's parents. In the case of those respondents (17.5%) who have Noah escape "with family and others" the "others" turn out to be non-relatives. They are "intelligent," "humble," "God-fearing," "repentent" or otherwise "good" men worthy of repopulating the earth. Finally all of those who escaped the flood never returned to their place of origin.

There are in fact many different versions of the flood myth among many peoples of the world. Many of them are included in Frazer's book on *Fold-Lore in the Old Testament* (1919). The Chinese version, which follows, is built on components totally outside of the consciousness of any of my American students. It is universally known in China and included in Frazer's compilation just mentioned.

Emperors Yao and Shun (said respectively to have reigned 2357-2257 B.C. and 2258-2206 B.C.) were great and moral rulers. In Yao's old age a terrible flood devastated the country. Yao appointed a certain Kun to control the flood but after nine years of work, Kun was unsuccessful. Yao decided to resign and offered the throne to the able and popular man Shun as his successor. Emperor Shun executed Kun for his failure but appointed the son of the executed, Yu, in his place. Yu worked for thirteen years, in the course of which he went all over the country, and succeeded in finally eradicating the flood. During his tours of duty he passed by his own house three different times, but he did not enter it even once. After his success, Yu was offered the throne by a grateful Emperor Shun.

The Chinese legend features no God who is going to destroy all mankind because of their wickedness. Flood is a natural calamity with which man has to contend. It does not name any chosen man to be favored by God and spared from the disaster; instead all Chinese are to be saved from it by a benevolent government. It does not have the theme that the Chinese (or some one group among them) should take refuge in a boat or flee the inundated country; instead they remain where they were born and lived. There is no question of sons going in different directions from their parents; instead Yu works hard to succeed where his father has failed, thus not only vindicating his father's name but also bringing honor to his ancestors. Finally, by now even once visiting his wife during his many years of work, Yu put his larger duty before matters of his own heart.

I have devoted so much time to the analysis of one myth because of its basic relevance to our subject at hand: that learning process involves far more than schools and availability. Having been reared in a psychocultural environment in which individualism prevails, in which parents have no place in the scheme of things once a person reaches adulthood, in which go-it-alone has great appeal though not practical for a majority, American college students cannot think of other approaches to their problems, non-Western type of approaches, even when asked to exercise their imagination at its wildest. Americans came to the New World by boat to escape something. They have been on the boat, or dreaming about it, ever since. They love physical mobility, if not by boat, on wheels; if not to another world, at least to the suburbs. But they are deeply confined by intellectual immobility, from which they have not been able or willing to extricate themselves.

I submit that as long as American students are so immobilized mentally they may learn to become good technicians of how to do their traditional things better but they cannot learn anything new, anything that may help in correcting some of the pitfalls of the Western way of life. It is interesting that one of my fellow conferees, Dr. Thomas Billings, addressing himself to the problem of cultural and subcultural considerations in learning and educational achievement, based his lecture on the ideas of William James, Martin Buber, and Will Rogers but nothing at all from non-Western scholars and thinkers except for a brief reference to Zen experience.

II

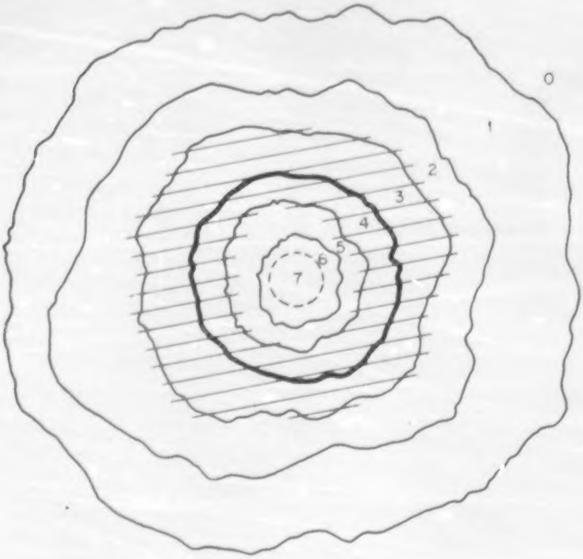
Being culture-bound in the intellectual process is not peculiar to Americans. But since we in this symposium are concerned with the problem of learning, and of training individuals for a society that prides itself on freedom of thought, we might examine why people are culture-bound and how we can possibly break through that cultural barrier if breaking it will help our understanding if not the solution of the problem. Here I must begin with my formulation of Psychosocial Homeostasis (PSH) (see Figure 1). This hypothesis was first published in the *American Anthropologist* (Hsu 1971a: 23-44). Another version, with special reference to psychoanalysis and present day developments in the United States, has appeared in *The Center Magazine* (November-December, 1973), after it was first delivered to the American Psychiatric Association's 1973 Annual Convention as William P. Menninger Memorial Lecture. I shall only make the following brief statements about it.

1. In contrast to the Freudian egocentric view of man, our sociocentric formulation has no use for Layers 7 and 6, the Unconscious and Pre-conscious, although we do not deny their existence, in the same way that all social scientists today make no use of the fact of gravitation but do not deny its existence.

2. Instead of regarding the individual psyche as the most essential element of the individual's existence as a human being, our sociocentric formulation sees the *interpersonal nexus* as most crucial, as the entity that is the source of his meaning of life and his problems, of his desires for successes and his propensities for failures.

3. Human beings relate to each other either through *role* (meaning usefulness) or *affect* (meaning feeling). The most common form of role is employment and ultimately is what money can buy. Role relationships are spoken of in terms of efficiency, expedience, advantages and disadvantages, duty or given wages for well defined

Figure 1. Psychosociogram (PSG) of Man.



7	Unconscious
6	Preconscious
5	Unexpressed conscious
4	Expressible conscious
3	Intimate Society and Culture
2	Operative Society and Culture
1	Wider Society and Culture
0	Outer World

quantum of work. The most common form of affect is that which goes on between spouses, lovers, parents and children, or friends, and at all times is what money cannot buy. Affect relationships are characterized by such terms as love, loyalty, sympathy, trust or devotion. It certainly must not include the game plan. Can we imagine a good marriage or friendship founded on some game plan?

The element of our PSH model most relevant to us in the present analysis is that, while role and affect are both components of the *interpersonal nexus,* the affect component is crucial to the individual's sense of well being since it creates the condition of intimacy, a condition in which one can be off guard. dares to reveal his worst without the fear of rejection and can afford to receive help and sympathy without the onus of charity. I regard the need for it to be literally as important as everyone's requirement for food, water and air.

4. The core idea of PSH is that, since the individual's need for affective human links is as important as his requirement for food, water and air, his efforts to obtain them will be unceasing. In case of deficiency he will resort to substitution. He can expand outward to Layers 1 and 0 (Wider Society and Outer World) or retract inward to Layers 6 and 7 (Pre-conscious and Unconscious). In the former route when one set of humans fails him, he will seek another; and when humans are unavailable, he will concentrate on gods, ideologies, animals or things. In the inward route to PSH the individual will be preoccupied with the depths of his own psyche through psychoanalysis or Transcendental Meditation or drugs under a variety of guises.

However, whether outward or inward, the individual never gives up his need for other humans. In the outward route he tends to use non-human elements of PSH as a bridge to affective links with humans. That is why some people justified the Inquisition in the name of religious beliefs, or wars to make the world safe for democracy ot totalitarianism. That is why, after the loss of his monetary treasures, Silas Marner, the hero of George Eliot's celebrated novel, became deeply attached to the little girl who strayed into his home. Similarly those who follow the inward route to PSH join hippie colonies, fellow adultors of Maharishi or those who believe in and can afford psychoanalysis forever, or nearly forever. Even Henry David Thoreau hoped to start a club of solitude lovers. Why else would he write so many Journals?

III

While the PSH needs are common to all mankind, the patterns of their satisfaction vary greatly. A food analogy will enable us to comprehend this easily. All humans have similar nutritional requirements. But what they eat, how they prepare their food, their eating habits and their conspicuous consumption patterns are not at all the same. In the case of the PSH process, a basic determinant of its variation is variation in kinship.

The study of kinship is an old preoccupation in anthropology, but it has not helped us much to understand human behavior because the students of kinship have not grasped its essence. They keep concentrating on kinship terms, or correlations of forms of marriage with inheritance, which is not unlike attempting to study nutrition on the basis of classifications of foods into crepe suzette and chop suey.

The Dominant Kinship Dyad hypothesis, first published in 1965, is designed to bypass such pitfalls so that we can ascertain the specific links between patterns of kinship and characteristics of behavior and culture. For a fuller presentation of this hypothesis and some further work on it the reader should consult several publications (Hsu 1965, 1966, 1971b; Tatje and Hsu 1973; Schaefer 1973a and 1973b). Here I shall address myself only to the question as to how the characteristics of the American kinship system bear on the American PSH process.

The elementary kinship configuration of parents and children is the first human nexus of all mankind. For the newborn infant that is where he receives this affective attention and begins his PSH process. That situation is so important that we know an infant who suffers from affective neglect will suffer from biological retardation. But the American kinship system*, which is characterized by the attributes of discontinuity, exclusiveness, volition and sexuality, creates problems (and presents opportunities) for the young. For although his first sources of PSH are his parents and siblings, the kinship attribute of discontinuity and exclusiveness compel him to forego that comfortable position in the name of independence and freedom. Discontinuity means there are no permanent human links. As he grows up self-esteem requires that he avoid the shadow of his ancestors.

Exclusiveness means that any triad has a tendency of becoming a dyad against one, as the sociologist George Simmel correctly found in Western interpersonal relationships which he mistook to be universal. Thus exclusiveness is the basis for the Oedipal problem. The attribute of sexuality, which leads the individual to project sex in all spheres of life, merely adds more zest to it. As the infants grow into children and then adolescents, exclusiveness necessarily exacerbates the division between youth and age, more commonly known as the generation gap. In this situation the attribute of volition, or freedom from authority cannot but add to that gap; for the youth's desire to find their PSH resources away from their parents usually leads to stronger efforts on the part of their parents to hold, especially if they have been a major source of the PSH of their elders.

It does not mean, of course, all adult Americans are separated from their parents, but they must alter the nature of their relationship with their elders after they marry or reach legal age. Furthermore, given a society where manhood (or womanhood) is defined as independence from parents, the drive for such independence cannot but begin long before attainment of the ability to do so. However, given the need for interpersonal nexus, the individual has no alternative but go to his peers.

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*I confine myself to white Americans, a majority of whom claim, in every survey, to be "middle class."

But relationship with peers is drastically different from that with parents. Parents are like dogs. We kick them in the teeth and they will come back for more. No one can take his peers for granted that way. He and they are likely to compete for the same things. Here is where everything is subject to change without notice. Here is where the game plan takes charge, where no one wants to be made a sucker of. Having rejected or been resisting affect from parents, young men and women in school are most in need of affect from their peers to feather their essential PSH process. What they find is that the applicable sphere for affect has greatly shrunk, but role has wholly taken charge. This is the basic condition for the intense loneliness experienced by the present day young which many have tried to link with drug abuse. This adolescent pattern of hazardous links with peers sets the tone of the American's approach to his fellow men for the rest of his life in a world where image and deodorants are all important, where games people play are at their best, and where devotion, loyalty and considerateness seem so old fashioned and foolish.

IV

What does all this have to do with learning?

To begin with, we know all too well that learning is impossible without intelligence. Little can be done about individuals who do not have the cerebral equipment to learn. The earlier in life the greater that capacity, and the speedier the results. From this point of view the products of the Educational Testing Service in the form of SAT and GRE are useful. They tell us something, however imperfectly, about the potentials of our students as future role players.

However, what has not been emphasized and only vaguely appreciated in our entire educational system is the place of affect, which is at least as important in the learning process as intelligence. There is an old adage: "You can draw a donkey to water . . ." Need I complete it?

There are several aspects. First, if the youngsters are under pressure to show independence from their parents, and if school and academic work are identified in their minds with parental wishes and even orders, the former cannot possibly develop strong attraction for the latter. How could it be otherwise? People who reject parents will certainly develop no love for what their parents stand for.

Secondly teachers, to the extent they act as parental surrogates, will suffer from the same lack of affective links with their pupils as the parents. But they are able to foster an affective attitude toward learning even less than parents. The American society defines the teacher-pupil relationship in terms of role, not affect. It is a temporary relationship not a long term one. Parents have exclusive control over their children, and they resent teachres' suggestions or criticisms contrary to their wishes but epecially attachments between teachers and their children. My observations are that the more affluent the parents the less they tend to tolerate what they regard as interference from the teachers.

At the same time pupils and teachers who develop friendship with each other are up against another problem. The pupil runs the danger of being labelled teacher's pet, and the teacher must protect himself against sexual insinuations or even accusations. Given the kinship attribute of sexuality, such projections are inevitable. As a result, high school teachers have to be on guard in their relationship with pupils. In some schools, such as Evanston Township High School, teachers' offices where they counsel the young feature see-through ceiling to floor glass walls.

My thesis is that pupils will develop a more positive attitude toward school and learning if they can relate affectively to their teachers. On the other hand, if they have to declare independence from parents they will tend to find anything the parents stand for suspect.

I suggest that herein lies the real causes of school vandalism and school dropout. Vandalism and dropout problems are merely symptoms of the shrinkage of affect and the escalation of role relations in human contexts where succor, sympathy, loyalty and affection would have better served the needs of the individual and the educational progress of the society as a whole. When role relationships drive out affect relationships, all humans will treat each other as things. But since human beings are not things but creatures equipped with intelligence and imagination and affect, they may prefer to treat other people as things but they will definitely resent being treated as things by others. The PSH failures will thus lead to so much more mutual mistrust, suspicion and hatred that negative attitudes will outweigh positive ones. In these circumstances the cohesion of the society is in jeopardy, not merely the learning process.

V

Two kinds of facts seem to support my thesis that affect is of great importance in the educative process.

It is well known that school and college entrance examinations are a recurrent nightmare for the young in Taiwan and Japan. In Japan cases of youthful suicide due to failure in such examinations are not at all rare. Both in Taiwan and Japan the burden of "extra-school lessons" on the average youth is extremely heavy. In Taiwan the popular nomenclature for this practice is *"ngo bu"* (evil exercises). It is not unusual for students who get out of regular school at 3:30 p.m. to then spend another three hours or more in such "extra-school lessons," given by tutors hired by parents. Many news stories and magazines essays bitterly complain against this practice, which often impairs the young people's health.

But the dropout rate and refusal rate on the part of the young to undergo such hardship in both societies is negligible. The Japanese and Taiwanese youth endure such hardships without significant rebellion because they *want* to please their parents. As a whole they want to do what their parents want them to do, not their own things. They have affective links with their parents and teachers since their parents and teachers play an important part in their own PSH process. Consequently they want to get *into* the schools in contrast to many of their American counterparts who cannot wait to get *out* of them.

Of course the students of Taiwan and Japan are not known for their innovativeness. Compared with their American counterparts they are far more imitative and far less enterprising. The West in general and America in particular have been highly productive of creative zealots and successes in science and technology, in commercialism and the arts, in missionary movements and empire building. But these salutary achievements must be seen against American innovativeness and enterprise in other respects.

For example, 5,000 glasses, 12,000 spoons and 10,000 food trays disappeared in one year (1972) from the cafeteria of the Pentagon; the John F. Kennedy Center was stripped bare, including its chandeliers by visitors shortly after it opened; cemeteries are vandalized, not only by way of an occasional lark resulting in a few broken head stones, but coffins taken out and corpses decimated, as recently

(1973) happened in Bayside Cemetery in Brooklyn; universities have to employ female decoys and armed guards to protect their coeds from rape; citizens fear to walk the streets after dark and refuse to open doors for callers; and corruption or violation of public trust is rife in all phases of government; this is, too, not easily matched by the Asian societies. The new inventions and discoveries for good and the new models of anti-social intents are both products of a precarious PSH process in which human beings keep escalating role relations in the hope of getting some relief from the general affectlessness.

Furthermore, it is well to recall that, except for advances in physical sciences and some fields of technology, all that has made America physically the envy of the world did not originate in the universities. A majority of leaders in business and industry, politics and crusading movements are no more persons with graduate degrees than those who man our assembly lines or provide us with our daily bread and our daily entertainments. They have mostly been accomplished by Americans who have not followed in the footstepts of their parents and have made their own PSH patterns in spite of their forebears.

The other kind of facts that seem to support my thesis comes from the results of what is known as Achievement Motivation Training in schools (McLelland 1972: 129-145). The Harvard studies did not yield convincing tangible results in classroom performance, but the St. Louis University studies did. However, while "training did seem to improve science and math performance quite significantly in the year after the training . . . there were no effects of training on grade point average of social studies test scores" (McLelland 1972: 131). From this and other evidences, McLelland opines that achievement motivation training "improves performance more in those subject matters which require concrete action" (McLelland 1972: 136).

The long term effects of achievement motivation training, or any other special instructional methods, remain to be seen. So far the few attempts to ascertain the impact of achievement motivation training on "non-school activities" are feeble and unreliable (McLelland 1972: 132-35). For my part, I cannot but observe that, even in the limited sphere of classroom performance, the achievements in social studies are harder to improve because social studies have far more to do with affect, therefore with the student's PSH pattern, than math and science. The affective patterns are formed in the kinship setting, and extend from that setting to the schools, not vice versa. It does not seem to me we can hope to make much of a permanent improvement in the learning process unless we try to rethink our prevailing patterns of kinship.

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The Limits of Human Potential:

Comments on
Francis L.K. Hsu's Kinship, Psychosocial Homeostatis and Learning

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The present paper diverges from the pattern that has become common for these Learning Sympoisum Proceedings. Our purpose is to further elaborate as best we can Dr. Hsu's points on learning, education and culture by analyzing one current popular "solution" to the social problems of American society. Specifically we examine from Hsu's cross-national perspective what has come to be known as the human potential movement. Our reasons for this are rather straightforward. Discussions, particularly with students, indicate a general acceptance of Hsu's analysis of American educational problems. Most agree, some quite heatedly, that "... what has not been emphasized and only vaguely appreciated in our entire educational system is the place of affect which is at least as important in the learning process as intelligence" (Hsu, 1973). But, there seems to exist an equally widespread misunderstanding of Hsu's implied solutions to this problem. Furthermore, our students fairly consistently express their understanding of Hsu in the language of self-actualization, encounter groups and the terminology of the human potential movement. Perhaps this is reasonable since the human potential movement has itself arisen from an expressed need for more personal, affectual approaches to human behavior within traditional psychology. There has been a popular acceptance of the movement and its concrete techniques of using small groups to induce intimacy, trust and honesty. Particularly interesting for our purposes has been the use of encounter techniques within education (Johnson, 1972). It is precisely these techniques that our students refer to when discussing how Hsu's ends might be met.

These discussions always left us feeling very uneasy. This of course is not a new experience for most college instructors these days. In this case, however, our uneasiness prompted us to further specify why we believe there are crucial differences between the ideas presented by Hsu and the human potential movement. We were sufficiently motivated that we decided for this paper to review some of the available human potential literature in order to further differentiate our position. We do not claim that our review has been exhaustive – the sheer bulk of available material makes that humanly impossible. We do think that we have sufficiently explored the writings of the movement's promoters (and a few of its opponents) to allow general conclusions on the question of how the movement differs from Hsu.

So, to let you know where our heads are at (as they say in the encountering game) we present first our conclusions, followed by some of the specific reasons for these conclusions. Our conclusions are basically two:

(a) The fundamental view of man and his emotional needs espoused by the human potential movement is quite different from that held by Hsu. Human potential assumes that greater emotional ease in social interactions comes with acceptance of self and the ability to be "flexible," open, and honest. It is assumed that acceptance and understanding of others proceeds from a firm understanding and satisfaction with self. Hsu's assumption is that affective ease and stability as well as openness, honesty, and "flexibility" (in terms of understanding or empathy) proceed from a firm and responsible commitment to the welfare of others, their needs and problems. This occurs in an atmosphere promoting the permanence or continuity of interpersonal relationships rather than allowing for convenient and painless dissolution of problematic relationships. Hsu's assumption, then, is that self-adjustment proceeds naturally from understanding of, concern and responsibility for one's fellows. Thus, the overriding concern in the human potential movement lies with *self*-actualization. Hsu's contention is that development of the individual takes place in a social context and thus can only take place in an atmosphere of *mutual* social concern.

(b) Contrary to accepted thinking the human potential movement is *not* a new cultural element. The movement serves to perpetuate and, indeed, escalate existing American values and the ethnocentric view of man inherent in these values (most importantly, the sovereignty of the individual, his freedom and autonomy). Paradoxically, these are exactly the same values that the movement is expressly designed to change. It is precisely this kind of escalating American ethnocentrism that Hsu addresses in his Symposium talk.

We draw these conclusions with the full awareness of their potential unpopularity. The human potential movement represents to many Americans the modern-day Noah's ark. In 1971 three-quarters of a million people paid for some form of personal growth experience. It would seem from these figures that there are many who agree with Rogers (1967) that encounter groups are "a potent new cultural development" and that "the group experience . . . (has) significant implications for society." We view the question of whether encounter groups can deliver the expected social changes as very important. It is precisely because they currently enjoy such popularity that such questions should be asked. This analysis is therefore presented because we believe that Hsu's perspectives can help us to identify ineffective solutions and to specify the nature of our social problems by avoiding some of the pitfalls of ethnocentrism.

Dr. Hsu's View

A summary of Hsu's theoretical position is in order at the outset. As Hsu sees it there are two minimum components necessary for human survival. "The first is freedom from physical suffering, hunger, malnutrition, and bodily harm due to natural disasters and illness. The second is freedom from borefom, purposelessness, fear of fellow men, and crippling anxiety about one's place in society" (Hsu, 1971, p. 148). American society has not been successful at meeting the latter needs. Their satisfaction requires "affect security in which one can count upon the sympathy and support of another even when one ceases to be useful" (Hsu, 1971). American society fails on this count because of its emphasis on self-reliance and individualism. The early experiences that the child has in the family are particularly important in this respect. When children are encouraged to be independent, "get out on their own," and "break ties" with their parents, as they commonly are in American families, strong affect and intimacy cannot develop. The outcomes of extreme individuality can be observed in the shallowness and the discontinuity of the relationships one has with others.

A shift in emphasis is needed. The permanence, or "continuity," of relationships must be regained in order that affect and intimacy may be restored. It is important to emphasize that Hsu speaks of a balance – affect is not solely important for psychosocial homeostatis. It is one of a pair of components. Affect is focused upon because it is the component neglected by American values.*

The Human Potential View

In agreement with Hsu's basic emphasis on the social nature and needs of man, the human potential movement holds that "because man is a social animal, most of his happiness and fulfillment rests upon his ability to relate effectively to other humans." (Johnson, 1972, p. 1). However, from this common point of departure the two perspectives veer off in fundamentally different directions.

The human potential movement's prime concern lies with *self-actualization* of the individual.

> Self-actualization consists primarily of . . . having the ability to tie the past and the future to the present in meaningful continuity *while fully living in the present. The self-actualized person appears to be less burdened by guilts, regrets, and resentments* from the past than is the non self-actualizing person . . .
>
> *Self-actualization is also dependent on being autonomous. The autonomous person is liberated from rigid adherence to parental values or to social pressures and expectancies.* He flexibly applies *his* values and principles in order to behave in ways appropriate to the situation he is in. (Johnson, 1972, pp. 2-3; italics ours).

At base, the human potential movement is an attempt to bring about greater emotional ease and stability in interpersonal relationships by training individuals to be self-reliant, emotionally flexible, and open to new interpersonal experience.

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* In contrast, Hsu's critique of China emphasizes its historical inability to satisfy the physical needs (an American strength). He concludes that China can be called the land of famine.

The Problems of Human Potential

Both Dr. Hsu and human potential theorists agree that a crisis of interpersonal relations exists. From Hsu's perspective, however, the reason for the crisis stems from the fundamental American emphasis on self-reliance. The solution, of course, lies with a reduction of this overriding emphasis and a concomitant increase in the emphasis on human social interdependence and responsibility – as he terms it, "mutual reciprocity." From the human mental potential point of view the reason for the crisis is more a matter of fundamental emotional and social rigidity in the human being. The human potential solution is to increase individual emotional autonomy and flexibility while concomitantly working to decrease stultifying interpersonal dependence.

The human potential movement has reacted to a very real social problem in America in a typically American way. As Hsu observes (1971), when confronted with a problem Americans typically (a) engage in agonizing self-examination followed by (b) a call for greater individual strength. Witness the aftermath of Sputnik, the political assassinations of the sixties, Watergate, and the energy crisis. In the case of the "crisis of interpersonal relations," this kind of reaction is often counter-productive. We present, then, a brief summary of "paradoxes" inherent in human potential theory and practice (i.e., "encounter") when viewed from Hsu's vantage point:

a) The human potential movement attempts to solve problems of interpersonal relations by training individuals to be *more* self-reliant, emotionally autonomous, self-sufficient, etc. Other-directed behavior (e.g., empathy, emotional support, etc.) are emphasized but held subordinate to self-oriented responsibilities.

b) It attempts to bring about greater social stability by removing rather than building up rules or consistent patterns of interpersonal relations. In a sense, it tries to design a human being who is at ease with the growing "normlessness" typical of American social relations.

c) It attempts to promote emotional stability and security while escalating the all-too-often aimless and intensive search for "meaningful relationships" (rather than emphasizing the need for continuity and permanence in truly intimate affective relations).

d) It attempts to bring about more spontaneous emotional understanding, the capacity for empathy, and "other-directed" concern while forcing intense self-analysis and introspection.

e) It challenges one to build trust and openness in situations (e.g., encounter sessions) which often promote, encourage and even force the breakdown of one's own beliefs, perceptions, and deep understanding of himself.

f) It attempts to bring about greater social union and affectice ease in situations (e.g., encounter) wh i xh often deliberately promote (or at least allow) the escalation of intense emotionality and aggressive interpersonal confrontation (in the name of therapeutic release and "honesty").

g) It attempts to bring about greater self-adjustment in a situation - so structured as to allow or encourage coercive conformity and surrender to group concensus, perceptions, and attitudes.

h) It attempts to build emotional security by increasing the facility with which people can initiate and terminate relationships in the name of responsibility to self.

i) It attempts to employ intensive, momentary, transient, and often artificial techniques to train or eliminate life-long habitual social patterns and attitudes leading all-too-often to confusion and disillusionment rather than any sense of emotional ease and security.

Admittedly, the listing given above is open to debate. We do not mean to purport that this listing constitutes a comprehensive review or that any or all of these "paradoxes" infect all aspects of the human potential movement or all encounter groupings and techniqhes. Rather, we simply wish to propose that these items constitute some possible counter-productive problems which arise out of (a) certain aspects of the human potential view of man (e.g., extreme emphasis on the self and self-development), and (b) the lack of correspondence between and means ends (e.g., certain questionable encounter techniques and guidelines thought to aid self-actualization).

Problems of Encounter

The centrality of individualism to the human potential movement hardly needs extended documentation here. A quick reading of any issue of the *Journal of Humanistic Psychology* or any of the writings of Rogers (1967; 1961), Maslow (1970), and others, (e.g., Schutz, 1967; Peels, 1969) will provide immediate substantiation of this point. But two examples of the diverse forms of individuality will be given here.

Stories are told of the unique brand of individuality of Fritz Perls, one of the movement's better-known developers. Perls would follow his "I please myself first" philosophy by making audiences wait while he slowly took a seat and smoked a cigarette before he began a session. These stories are usually told with just the right mixture of disapproval, envy, and righteous indignation.

On an entirely different level, individualism reaches one of its most extreme points in a recent article entitled "Group therapy: let the buyer beware." One of the caveats given to the prospective "grouper" is to be "doubly cautious" in selecting a group "if you are sanely suspicious of your grasp on reality" (Shostrum, 1969).

Part of the warnings and emphasis on personal responsibility may be an attempt to forestall legal responsibility should physical or psychological damage occur. The chances of some sort of harm being done are evidently great (Yalom & Lieberman, 1971; Maliver, 1973; Back, 1972; Shostrum, 1969). One critic has claimed that relative to measurable gains the risks far exceed those usually found acceptable for warfare. But the emphasis on individualism runs deeper than simple protection of the group leader.

The apparent paradox of increasing American invividuality would of course be beside the point if the encounter group experience worked in bringing about needed social change. There are, however, situational characteristics of encounter techniques working in counterforce to the changes sought. The specific exercises conducted during encounter meetings illustrate this point. Take, for instance, the commonly-used exercise for inducing trust by having someone fall backwards into the (hopefully) waiting arms of another person. As Koch (1971) notes, rather than indicating anything about trust, being caught simply means that the catcher is "capable of playing a meaningless game according to prescribed and easily applicable rules." It is doubtful that this would be a very functional way of sorting out the trustworthy from the untrustworthy in everyday life. Human trust is made of sterner stuff. The shallowness of this particular exercise is further demonstrated by the case of the fellow who decided to find out how he would feel if he failed to catch his partner (Maliver, 1973). The sucker (what else would you call him in this context) luckily experienced only minor bumps. You probably would not want to buy a used car from someone who had a track record like that, but after all he was exercising his individuality.

Other examples of the suspension of the normal rules of responsible behavior are easily found. There is the case, for instance, of the attractive young woman who during an exercise in the expression of supposed platonic tenderness gave sensual kisses to each man in the group (Maliver, 1973). When confronted by one angry male for being a sexual tease and promoting jealousy among group members she was surprised that anyone would be upset. She too was playing out her little experiment in human behavior.

We think it interesting that our perusal of the indexes of human potential books finds that the word "responsibility" occurs rarely: much less often than words referring to "self." When "responsibility" does occur it usually refers to responsibility to oneself, not to other people.

We agree with Koch (1971) that many of the encounter group exercises have the potential of encouraging a very demeaning view of humans. Interestingly, though, Koch's critique also misses the point on the dangers of extreme individualism.

But yet the exercises are only a reflection of the circumstances typical of encounter groups. From the descriptions found in the literature we find that groups have often been short-term, composed of strangers who know each other only by first name, participants will likely never meet again, and the group is conveniented solely for the purposes of encountering. These are exactly the same conditions that characterize the dehumanizing aspects of American society at large. They are the conditions under which it is difficult for individuals to establish stable relationships, where true affect is impossible, and where intense emotion may be confused for intimacy. Both the theoreticians of the movement and Hsu believe these are the conditions typical of a dehumanized society.

Ambiguity of the encounter situation is also a problem. Often ambiguity is maintained by the attitude that emotions must only be experienced and not intellectually examined (see especially Schutz, 1967). The person who stops to think about what he is doing may be in for a rough time from fellow groupers. The terminology of the movement further operates to retain an ambiguous character to the experiences and goals of the group. Trust, intimacy, human growth, good feelings, and self-actualization may remain as undifferentiated following the encounter as they were before. Indeed, the philosophy of the movement is such that further defining of the concepts may be unacceptable. Because the concepts are undifferentiated they can serve as the rationale for almost any activity. Self-actualization undefined can as easily be a justification for an individual writing a poem, climbing a mountain, robbing a bank, seducing a child or letting someone fall on his head. Our point here is that ambiguity leads to encounter situations that are highly susceptible to coercive conformity. The emphasis on the here-and-now almost pre-ordains that the person's activities will be solely emotional and in conformity with the others in the group. It is the purpose of the group through its trivial exercises to reduce humans in the group to the same undifferentiated mass of emotion. Individuality in the sense of personal differences are often not permitted. Personal mannerisms and cautions are seen as veneers – masks – designed to hide the true self. The person is not accepted as is, but must conform and become a part of the group. And the group, in its pursuit of "personal growth" can be brutal. A reading of encounter group transcripts reveals a number of cases of normally sensitive persons being forced, in more or less subtle ways, to conform (Lakin, 1972; Rogers, 1967).

The definitional generalities of the human potential movement can be compared with the manner in which Hsu handles these matters. When we do this we find not abstract nameless groups but rather very specific clusterings of human beings that have a history, a purpose and stability. The relationships between people likewise are not ill-defined generalizations of "trust," "love," and "intimacy" but emotions tied to enduring interpersonal relationships – responsibility to parents, love of children, kinship. The human potential movements commits an error that is common to much of American academic psychology. It has proceeded as if the generalities obtained on the basis of culturally biased observations are universally true. More to the point, it has generalized beyond the context of everyday life. Interestingly, many college students we have talked to do not accept Hsu's suggestion that a way of promoting social responsibility in our children is by acting in a responsible way towards parents. Of course, Hsu might expect this on purely theoretical grounds. This suggestion seemingly is upsetting to the American mentality. Better to talk of generalized love and responsibility then something real like having and showing respect for one's parents or taking on the responsibility of another human being in marriage.

Conclusion

Our reading of the human potential literature indicates that changes in the typical structure of encounter groups have been occurring. In contrast to earlier used structures as we have described them here, groups now are likely to be composed of people who know each other, have a long-term commitment to one another, and are working on a specific set of communication problems. Groups today often operate in the context of every-day life. Equally important, more time seems to be spent on discussion and analysis of what is happening in the group rather than on simple experiencing of emotions. Also, there is a decided emphasis in the literature, at least on the verbal level, on the need for research examining the effects of encountering.

We see these as important changes. Encounter groups and exercises used appropriately can be important technical aides in the identification of interpersonal relation problems.

However, if we accept Hsu's analysis of educational problems we are alerted to the fact that at best encounter groups are only stop-gap measures. They are geared for dealing with immediate specific interpersonal problems that result from individualism. But, they are not designed to bring about societal change. They cannot lead to the kind of affect that Hsu talks about. At worst, the exercises may be holding out a false solution that escalates the search along the wrong lines by perpetuating the use of self-discovery approaches. As we see it (and, of course, as Hsu sees it), the question is more importantly one of changing the social fabric than fitting and shaping the individual threads.

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